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Original Articles

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Arthropod-Borne Disease of Man in Arizona

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". . . . . the human race is in a rather delicate, unstable relation to its environment . . . science is steadily deepening its insight into nature's laws and guided by this insight controlling the daily and hourly conflict of nature with mankind . . . ." — *Theobald Smith*

SIR PATRICK MANSON, serving as a medical officer on the Island of Amoy off the coast of China, gave the first strong impetus to the investigation of the role of arthropods in the transmission of human disease. Arriving at his station in 1871, Manson became greatly interested in the study of filariasis, which was an extremely common disease among the inhabitants of Amoy. The huge numbers of embryos of the filaria worms in the blood of patients was impressive. Manson reasoned that all the embryos could not continue to develop without destroying themselves by killing the host. They must find their way to other hosts. It occurred to him that some blood sucking insect was the probable intermediary. Knowing that mosquitoes are particularly abundant in warm climates, and that filariasis is a disease of warm regions, he gave first consideration to mosquitoes as possible vectors.

In 1877-78, Manson fed mosquitoes on a man whose blood was teeming with the embryos. Subsequent examination revealed that the parasites penetrated the wall of the stomach and that many of them continued their maturation in the tissues of the mosquito. In accordance with current beliefs, Manson thought that mosquitoes die and fall in the water after completion of the egg-laying process. This would give opportunity for the release of the filaria embryos in the water and thus infect persons drinking the water(1). Following up these observations, Manson found that in only one of the common local mosquitoes did the development of the embryo proceed to completion.

It was not until 16 years later that other workers demonstrated that infection with filaria in the human is accomplished by the deposition of the fully developed larva by the mosquito on the skin in the act of biting and feeding. To Manson goes credit for discovering that a particular blood-sucking insect is a necessary intermediary in the propagation of a specific disease.

The most significant demonstration of the importance of insects in the transmission of disease took place between 1889 and 1893 by two American workers, Theobald Smith and F. L. Kilborne. In a series of nicely planned, thoroughly scientific experiments, they showed that ticks are the primary agents in the transfer of Texas cattle fever from one animal to another.

Manson had shown that a mosquito could take up an animal parasite from the blood and act as host. Smith and Kilborne went further by proving that after feeding on infected cattle, adult ticks drop to the ground to lay their eggs and that the infectious agent passes through the egg to the next generation of the tick, which may attack susceptible cattle and transmit the disease.

The most impressive demonstrations of the importance of arthropods in the spread of human disease were, of course, Ronald Ross's proof that mosquitoes can convey malaria infection from bird to bird and the confirmation of Carlos Finlay's theory of mosquito transmission of yellow fever by the U. S. Army Commission in 1900. Both yellow fever and malaria were diseases of tremendous importance to the human race, and the possibility of their control gave great promise for the future.

The first decades of this century saw steady progress in clearing up the epidemiological puzzles surrounding several important diseases. The role of the rat flea in the spread of plague, of the louse and the flea in typhus, of the mosquito in dengue, and of the tick in spotted fevers are only a few of the triumphs gained by scientific workers. The story of these investigations has been well told in a number of review papers. (2, 3, 4, 5)

The Situation in Arizona

The investigation of arthropod-borne disease of man in Arizona has been altogether fragmentary and incomplete. Although references to some work done in this state have no doubt escaped the attention of the author, it appears that a number of extensive surveys will be required to round out the Arizona picture in a comparatively satisfactory manner.

NON-BLOODSUCKING FLIES:

The mouth parts of these flies are equipped for taking up fluids, but not for piercing the skin. Their eggs may be deposited on manure, human feces, dead animals, or other decaying organic matter. The adults of many species feed on filth or human food and they will take blood, if made available by exposed wounds. After feeding, flies habitually regurgitate small drops of fluid and they may contaminate human food either by this regurgitated material or with their feces. Flies may also become contaminated externally with pathogenic organisms from feces, pus, sputum or other materials and may transfer these infectious agents to animal hosts. The best known representative of this group is the common house fly *(Musca domestica).*

Almost any communicable disease in which the infectious agent is excreted through the intestinal tract can be transmitted by non-blood sucking flies. From studies carried out by the United States Public Health Service during the past few years(6), it appears that various types of summer diarrheas, especially those of the dysentery group, are frequently carried by flies. The salmonella group of infections are also fly-transmitted in unsanitary conditions. The enteric group of viruses, which includes poliomyelitis, Coxsackie infections and others of importance, are becoming increasingly common or at least are being recognized more frequently. The possibility of flies acting as vectors in these infections must always be kept in mind.(7).

BLOOD-SUCKING FLIES:

Being equipped to pierce the skin and draw blood, these flies are well adapted for the biologic transmission of disease. Vectors of known importance are found among the mosquitoes, sandflies, gnats, black flies, horse flies and others.

Aside from mosquitoes, the blood-sucking flies are not known to be of great importance in the spread of disease in Arizona. Tularemia may be an exception, as it is known to be transmitted at times by the bite of the deer fly. Tularemia was first described in 1910 as occurring among ground squirrels in Tulare County, Calif. *Pasteurella tularensis,* the causative agent, is harbored by many species of wild animals, by a number of domestic animals, and by the wood tick, *Dermacentor andersoni.* Transmission to humans occurs in several ways: by infecting the skin in the dressing of animals, especially rabbits, which are carrying the organisms; by the bite of certain arthropods including ticks and the deerfly *(Chrysops discalis);* and following the ingestion of infected meat that is insufficiently cooked, or contaminated drinking water.

Cases of tularemia are reported sporadically in Arizona mostly from the northern half of the state. (See Table). No information on the mode of transmission involved in these human cases is available.

MOSQUITOES:

Malaria — Although vectors of malaria have been found along the irrigated valleys of Arizona, malaria has never been an important endemic disease in this state. Sporadic cases are reported each year and a considerable increase in the number of cases occurred with the return of military personnel from the tropics following World War II and the Korean campaign. Maxcy(8) in his survey of the distribution of malaria in the United States for the period 1919-1921 does not include Arizona among those states reporting as much as one death per 10,000 population from malaria. Barber, Komp and King(9) in their study of malaria in the southwestern United States from 1926-1928 visited the Salt River Valley. They state that "in the course of a short survey in July 1928, we found anopheles larvae *(Anopheles pseudopunctipennis)* on acquatic vegetation in the Salt River at Tempe. Very few cases of malaria have been reported from this region, and all have a history of infection elsewhere."

In a recent survey of malaria-carrying mosquitoes of the West, Aitken(10) states that there are two principal anophelines in Arizona, *Anopheles pseudopunctipennis,* and *Anopheles maculipennis freeborni.* He concludes that of these, *A. maculipennis freeborni* is the most important, if not the only vector of malaria in the West, particularly in the irrigated regions. No extensive survey of the anopheline fauna in Arizona has yet been undertaken, but given the presence of the vector and an infected human, small outbreaks of malaria might readily occur in a number of areas in Arizona. See Table for the distribution of recent, reported cases of malaria in Arizona.

Encephalitis: Numerous outbreaks of what is now known to have been virus encephalitis have been observed among horses in various parts of the United States over a period of about a century. It was not until 1930 that Meyer(11), studying an outbreak in California, isolated a neurotropic virus from the brains of horses dying of the disease.

In the years since the identification of the virus of equine encephalitis, a vast amount of laboratory and field work has been undertaken to elucidate the nature and extent of the encephalitis problem. Three distinct types of virus have been identified as causative agents of encephalitis in the United States. The Eastern type is generally found along the coastal areas of the Atlantic and Gulf of Mexica, while the Western and St. Louis types are more commonly found west of the Mississippi River. Infections occur chiefly during the summer months and in the early fall, when mosquitoes are most numerous and most active. Wild and domestic birds are the principle reservoirs of infection. Horses and man are only incidentally infected and are not important in the spread of the disease. Mosquitoes once infected with virus harbor it throughout their life span. It is thought that some mosquitoes overwinter in caves, rodent burrows and such protected spots, thus maintaining the agent locally to the next season. Some investigators have suggested that virus might be re-introduced to the United States each spring by birds migrating from tropical regions.

Whatever the explanation may be, encephalitis is endemic in the irrigated valleys of the southwestern states. Here the hot seasons bring optimal conditions for the production of mosquitoes and the continuous water supply; shelter and food attract multitudes of birds.

In the human, infection with encephalities viruses produces a variety of reactions. Many individuals are merely immunized by subclinical infections. This can be demonstrated by appropriate laboratory tests. Others develop mild influenza-like illnesses, which again can only be identified by the laboratory. These cases resemble non-paralytic poliomyelitis. Several infections usually have an acute onset, high fever, meningeal signs, stupor, disorientation, coma, spasticity, tremors and rarely some spastic paralysis. Fatality of clinical cases ranges from 5 to about 20 per cent. Diagnosis can be made by demonstrating a rise in antibody in serum specimens collected in the initial and convalescent stages of the illness. The virus may be isolated from the brain in fatal cases.

In the Southwest, the common mosquito, *Gulex tarsalis,* is the usual vector of both St. Louis and Western Encephalitis viruses.(12). Since

this mosquito is wide-spread in distribution, occurs in large numbers, feeds freely upon man, horses and birds, is highly susceptible to infection with the virus, and transmits the infection by bite with great efficiency, it fulfills the requirements for both endemic and epidemic vector.

In the reports of the Arizona State Health Department, one finds sporadic cases of infectious encephalitis over a long period of years. Reports of occasional cases also have appeared in the medical literature.(13, 14, 15). Apparently, the first epidemic reported in Arizona was described by Meikleohn and Hammon, of the Hooper Foundation in San Francisco. (16, 17). Those affected in this outbreak were all members of the families of migratory workers on farms in Pinal County. This outbreak occurred in July, August and September of 1941. There were 13 males and five females hospitalized. No deaths occurred, but six individuals had residual symptoms for varying lengths of time. One had permanent mental and motor damage. Encephalitis had been observed locally in horses before cases appeared among the human population. It was thought that most of the cases were due to infection with St. Louis virus, but there was evidence too that the Western Encephalitis virus was also active in the same area.

During recent years, 1951-58, from five to 12 cases of infectious encephalitis are reported in Arizona each year (See Table). The disease appears to be widespread, but most of the cases have been discovered in Maricopa, Pima, and Yuma counties.

CONE-NOSE BUGS (Also known as Kissing or Assassin Bugs):

This is a large bug family, most of whose members being in the main beneficial. Some species have acquired the habit of sucking blood. Ordinarily they feed on rodents and other small animals in whose nests they are commonly found. All of them will bite, and frequently the bites are painful, if picked up and handled carelessly. Some bugs enter houses and bite sleeping persons during the night. This usually is confined to poorly constructed, unsanitary houses.

A number of surveys beginning about 1936 have shown that cone-nosed bugs are readily found in many areas of Arizona(18, 19, 20). The bugs were mostly found in the nests of wood rats in Cochise, Santa Cruz, Pima, Pinal, Maricopa, Yavapai, and Yuma counties. On numerous occasions these bugs have been found to be naturally infected with the trypanosomes of Chagas's disease *(Trypanosoma cruzi)*. Infections with this trypanosome have also been found in opossums, wood rats, deer mice, house mice, bats, and armadillos. These observations are all from southwestern states. Such mammalian infections are considered to be associated with high infection rates in the bug vectors which live in close association with the animals. The infectious stage of the life cycle of the trypanosome is completed in the hind-gut of the bug and the parasite reaches the victim in the feces of the vector, which almost invariably defecates on the skin of the animal while in the act of sucking blood.

American trypanosomiasis (Chagas's disease) was first described in Brazil by Carlos Chagas in 1909. It is now known that this parasite is widely distributed in many parts of the Americas. In the United States, infected insects have been found in Texas, Arizona, and California.

Two forms of the disease in the human have been described. The acute form, usually seen in young children, is characterized by fever, lymphocytosis, edema of the face and eyelids, and neurological symptoms ranging from simple irritability to those resembling encephalitis. Trypanosomes can be demonstrated in the blood during the acute phase. A chronic form of the disease succeeds the acute phase in those children who survive. It may also be seen in adults. Symptoms of the chronic form are dependent on the localization of the parasites. Cardiac, adrenal, and neurotropic forms have been described. Except for periods of febrile relapse, trypanosomes are difficult to find in the blood of chronic cases.

In 1955, the first human case of trypanosomiasis was reported in this country in a 10-month old child in Corpus Christi, Texas(21). Diagnosis was confirmed by finding the parasite in the blood. No cases have been reported in Arizona, but in view of the endemicity of the infection in mammalian reservoirs and the constant presence of the vectors in the vicinity of many homes, physicians should keep the possibility of this disease in mind.

FLEAS:

Fleas are totally wingless, minute bloodsucking ectoparasites of warm-blooded animals. They like warmth and leave a host soon after it does to seek other hosts, not always of the same species. Some fleas are restricted to one type of host, but others infest a wide range of animals. In the absence of the preferred host, many fleas will feed on the blood of other available animals. The mouth parts of the flea are adapted for piercing and sucking. Generally, the female requires a blood meal to become capable of producing fertile eggs.

Murine Typhus: Typhus has probably been endemic for a long time in the South, but was first definitely identified some 30 years ago. The rat flea was shown to be the vector of murine typhus in 1931. From 1940 to about 1946 murine typhus reached almost epidemic proportions, but with the introduction of DDT and of rat control measures around homes, stores, barns and warehouses, cases of typhus fell to low figures by 1956(22).

Over 90 per cent of human cases of murine typhus have occurred south of a line drawn from Charleston, S. C. to Dallas, Texas. A few cases occur periodically in southern California and sporadic cases are reported in Arizona from time to time. (See Table).

Plague: Following the epidemic of plague in San Francisco at the beginning of this century, an epizootic in ground squirrels was noted in the nearby rural areas. Plague was conclusively demonstrated among these rodents in 1908 and since that time extensive investigations have been carried out by the United States Public Health Service and other agencies in the western states. Attention of these investigators was at first focused upon the larger colonial rodents, and it was thought that the primary reservoirs of plague were ground squirrels, wood rats, and prairie dogs. More recently there has been a growing conviction among investigators(23) that rodents other than the large colonial types may be the more usual reservoirs of the infectious agent. Meadow mice *(Microtus spp.)* and white-footed mice *(Peromyscus spp.)* and their fleas were discovered to be infected with plague in areas where the larger rodents were scarce.

Sylvatic plague is now known to be established in wild rodents and their fleas in a large area of western United States. Some hold that plague was introduced to the native rodents from the urban rat population at the time of the San Francisco epidemic, and that the disease has spread eastward to the interior states from the California focus. A second group of workers consider that plague has been endemic in the sylvan rodents of North America for a long period of time.

The available data strongly indicates that plague is widespread in northeastern Arizona(23). Most positive findings in field studies have come from localities where rodent populations are being much reduced by rapid die-off of animals. In spite of numerous active reservoirs, very few cases of human plague have been reported in this country. Man usually becomes infected by immediate contact with sick or dead rodents. From 1908 to 1956, only 92 human cases were discovered in the United States. 58 of these were fatal. Of these one occurred in Arizona, in Ganado, July 1950.

The introduction of plague into domestic rats from sylvanic rodents is probably uncommon, although it might occur. Such an introduction into a domestic rat population would cause a sharp epizootic, which might result in some human cases before it was discovered and brought under control.

TICKS:

The food of ticks consists entirely of blood and lymph with both males and females and all immature stages being bloodsuckers. Mammals, since they are warm blooded, are particularly attractive to these parasites. Ticks are highly important as transmitters of diseases of man and animals. Most species have a wide host range. Other factors adding to the vector potential of ticks are: (1) longevity (the span of life of some species may be over five years); (2) the great reproductive potential (some species deposit as many as 18,000 eggs); (3) their persistent bloodsucking (attaching firmly while feeding, they cannot be dislodged easily); and (4) their ability to pass many types of infective agents through the egg to the next generation.

Relapsing Fever: It was not until 1904 that workers in Africa proved that ticks could transmit a human disease, relapsing fever. In this

country, the earliest known endemic focus of tick-borne relapsing fever was discovered in the mountains of Colorado, near Denver, in 1915. A few years later cases were reported in the mountainous area of California near Lake Tahoe(24).

Tick-borne relapsing fever is now recognized as being endemic in at least 13 of the Far Western states and new foci are still being discovered from time to time. Most of the cases have been reported from California and Texas. A number of rodents are considered to be reservoirs of the disease and probably three or four species of ticks of the genus *Ornithodoros* are responsible for the transmission of the infection to humans. In California, many cases apparently contract infection shortly after opening up summer cottages that had been closed during the winter. Undoubtedly fasting ticks in the cottage left behind by rodents that have nested in the walls or under the floor sought the most convenient source of blood. In Texas, tick infested caves are known to be the source of human infections.

Relapsing fever is an acute febrile illness characterized by short febrile paroxysms lasting a few days, alternating with afebrile periods of three to four days. If untreated, as many as six or seven relapses may occur. Deaths are rare. The etiologic agent is a spirochete, *Borrelia duttoni*. Diagnosis is made by demonstrating the infectious agent in thick smears of blood at the height of a febrile attack. In Arizona, studies on the tick vectors of relapsing fever are inadequate. Probably *O. turicata, O. hermsi,* and maybe *O. talae* are involved in keeping the infection going on an endemic basis among rodents and in the occasional infection transmitted to man.

A number of reported cases of relapsing fever in Arizona have appeared in the literature(25,26). In each instance, the infection was thought to have been acquired in the mountainous areas near Greer, Apache County.

WOOD TICKS:

The most important of the disease- transmitting ticks is the wood tick, *Dermacentor andersoni*. Among the infections for which it is a vector are: Rocky Mountain spotted fever, tularemia, Q fever, and Colorado tick fever. This tick is found in mountainous, wooded, and sagebrush areas in all the western states and in western Canada. Adult ticks feed on the larger animals, and to some extent on small animals such as porcupines and jack rabbits. Larval forms seek smaller animals as hosts, usually rodents. (27).

Rocky Mountain Spotted Fever: This is the most feared disease transmitted by the wood tick. Indeed it is recognized as being one of the most severe of all infectious diseases. The causative agent is *Rickettsia rickettsii*. Clinically this disease resembles typhus, the chief differences being the duration of fever, the severity of the illness, and the time of appearance and distribtuion of the rash.

Rocky Mountain spotted fever was first reported in the mountainous areas of Montana in 1873. For many years it was thought that the disease was limited to the mountainous areas of the northwest United States, but since 1930 it has been discovered in 46 states, Canada, Mexico, and many regions of South America.

In western United States, most cases are reported in April, May, and early June, the season of prevalence of the wood tick. In high altitudes, danger may extend into the summer. It appears that persons living in livestock range country, and particularly those handling sheep, are in greatest danger. Forest service personnel, road builders, prospectors, trappers, hunters, campers, and fishermen are also exposed to danger of infection. The virulance of the disease varies with the locality and depends upon the level of virulence of the strain of *rickettsia* in the local tick population.

Judging from the number of reported cases, the incidence of Rocky Mountain spotted fever in Arizona is low. The wood tick is known to be prevalent in the northern portion of the state. According to reports of the state health department, a case of Rocky Mountain spotted fever occurred in 1932 and one in Apache County in 1945.. For the period 1951-1958 (See Table) 10 cases were reported from Apache, Coconino, Gila, Maricopa, Pima, Yavapai, and Yuma counties.

Colorado Tick Fever: The only known tick-transmitted virus disease of humans found in

the United States is Colorado tick fever. This disease was encountered by early settlers in the Rocky Mountain region and was described by army doctors stationed in that area(28). It was not until 1930 that a clear description and the present name was given to the disease. Florio el al.,(29) demonstrated that the causative agent could pass through filters, and later they reported isolation of the virus from naturally infected wood ticks.

The clinical picture of this disease produces a sharp, clearly defined onset with fever, headache, deep ocular pain, and severe aching of the back and legs. After a fever of moderate degree for about two days, there frequently follows a remission that lasts from two to four days. The remission is followed by a relapse of two to three days. This saddleback type of temperature curve is observed in the great majority of cases. A marked leukopenia is usually found, with the lowest point occurring during the relapse. Cases vary in severity from the subclinical to those with grave signs of central nervous system involvement resembling encephalitis. There have been no reported deaths.

The disease is most prevalent at the peak of the tick season in the late spring and early summer. The known geographic distribution of Colorado tick fever is limited to the habitat of the wood tick. Although this tick is known to be prevalent in northern Arizona, no cases of Colorado tick fever have yet been reported from this state. Cases have occurred in Utah and Colorado near the Four Corners area, and virus has been isolated from ticks collected in New Mexico(30).

Q Fever: Another disease in which ticks play an important role is Q fever. This disease entity was first described in 1935 among packing house workers in Australia. As the nature of the outbreak was unknown, the term "Q" for query was applied. The causative agent was found to be a *rickettsia,* but some characteristics of this agent have led investigators to put it in a separate genus, *Coxiella.* Shortly after the original discovery in Australia, an identical organism was isolated from ticks in Montana. During World War II, Q fever proved to be an important cause of illness among allied troops stationed in Italy, Grecee, and other Mediterranean areas. In 1946, the first known naturally occurring outbreak of Q fever in this country appeared in Amarillo, Texas, with 55 cases among the employes of three packing houses. Later in that year, a similar outbreak took place in Chicago. In 1947, the occurrence of an unusual type of pneumonia in California led to a survey by the United States Public Health Service which revealed that Q fever is endemic in that state. Subsequently, reports have revealed that Q fever is widely distributed throughout the world, its presence having been reported from 51 countries on five continents.

Q fever usually begins abruptly with fever, chills, headache, myalgia, and anorexia. Fever is remittant in type. In a small proportion of cases, the liver is enlarged and jaundice appears. Pneumonia, similar to viral pneumonia, occurs in the majority of cases. There is considerable variation in severity and duration. The disease may take a protracted course with fever lasting a month or more. However, Q fever is rarely fatal.

The host range of the *rickettsia* of Q fever is very broad, including numerous species of ticks, several insects, many species of wild and domestic animals, and a number of birds. From studies in several parts of the world, it would appear that the basic epidemiological cycle of Q fever is a rodent-tick one. Possibly cattle and sheep acquire infection through the mediation of a tick attacking both the rodent and domestic animals. Under conditions where domestic animals are herded together, it appears that cattle, sheep, and goats pass infection from one to another.

Human infections result from occupational exposure to infected livestock, from residence near infected premises, or from consumption of raw milk. Man, as well as livestock, may contract infection by inhalation of air-borne rickettsiae disseminated from the reservoir in naturally infected animals.

In cattle and sheep, the infectious agent localizes in the gravid uterus or in the lactating mammary glands. During the birth process, huge numbers of rickettsiae are shed with the placenta and membranes. Infective aerosols are generated and may be inhaled to produce infection in susceptible contacts. Infection in man may occur from primary aerosols, or from dust

originated from contaminated hides, fleece, etc. (31).

Diagnosis in Q fever is established by isolation of the specific rickettsia, or by demonstration that a rise in antibodies to the rickettsia has occurred in the patient's serum during the course of illness.

Apparently no human cases of Q fever have been reported in Arizona. A survey of cattle sera collected in the southern part of the state in 1958 showed that in at least two areas a large proportion of the cattle tested were strongly positive reactors(32). Around Phoenix about 40 per cent, and around Yuma about 75 per cent of the cattle sera tested were positive. Three other areas (Patagonia, Winkleman, and Sunflower) also had high percentages of positive reactors; however, antibody titers were low, possibly indicating older contact with Q fever. With this evidence of infection among herds of Arizona cattle, human infections are to be expected.

COCKROACHES:

Being omnivorous, cockroaches eat practically every food used by man and his domestic animals, as well as biological waste products such as garbage and sewage. They are found wherever man stores or prepares food. For the most part, cockroaches contaminate food by mechanical transmission of disease-causing organisms in the feces or on its legs and body.

Cockroaches have been shown to harbor naturally or experimentally about 40 species of pathogenic bacteria, especially organisms responsible for gastrointestinal infections.

Modern sewers are ideal habitats for cockroaches. There they may breed and become contaminated with fecal matter and from which they may gain entry to nearby buildings. In addition to bacteria and other disease agents, cockroaches may transmit several viral infections. Poliomyelitis viruses, Cocksackie, and other viruses of the enteric group have been isolated from naturally-infected cockroaches(33).

It is difficult to estimate how important a role cockroaches may play in disease transmission, as most of the evidence against them is circumstantial. There can be little question, however, that in groceries, restaurants, and other establishments handling food for large groups of people, the cockroach represents a considerable health hazard and should be kept under control.

Comment

With the exception of malaria and the enteric group, each of the arthropod-borne infections discussed above are not primarily human diseases. The basic cycle is maintained by passage of the infectious agent back and forth from arthropod to animal. In most instances, the agent is available in the blood stream of the animal host for short periods only, while the organism persists frequently in the arthropod for the duration of the life of the insect. In the case of the tick, the parasitic agent may pass through the egg to the next generation of ticks, thus being maintained for very long time periods. Man and his domestic animals may become infected more or less accidentally and represent a dead-end episode for the parasite.

Q fever appears to be an example of what was once strictly an arthropod-rodent disease that is now becoming an infection contracted by inhalation of airborne rickettsiae. This, at least, seems to be the case in areas where cattle, sheep, or goats are numerous. Perhaps this is a relatively new development due to marked changes in the ecology resulting from increasing numbers of livestock.

Summary

There is little evidence that arthropod-borne diseases are as yet highly important as health problems in Arizona. With extension of irrigation and with increasing numbers of people living near such agricultural areas, outbreaks of encephalitis are likely to become more frequent and to involve larger groups of people.

Also, as more people make use of the recreational areas of northern Arizona, such diseases as Rocky Mountain spotted fever, tularemia, relapsing fever, and Colorado tick fever are likely to be seen more frequently.

Evidence now in hand indicates that Q fever is prevalent among the cattle of Arizona. Experience in other states where this disease is endemic indicates that human cases of this infection are to be expected under such circumstances.

CASES OF ARTHROPOD-BORNE DISEASES AS REPORTED TO ARIZONA STATE DEPARTMENT OF HEALTH, 1951 THROUGH 1958

	Counties	*Apache*	*Cochise*	*Coconino*	*Gila*	*Graham*	*Greenlee*	*Maricopa*	*Mohave*	*Navajo*	*Pima*	*Pinal*	*Santa Cruz*	*Yavapai*	*Yuma*	*Total*
Infectious encephalitis	1951		2		2			1	1		1				5	21
	1952	1	1	1				1		1					2	7
	1953	1		1				4			2				3	11
	1954	1		1				4			2				3	11
	1955			1				2					1	1	2	7
	1956			1				2			2	2				7
	1957				1			3							1	5
	1958		2					2			1					5
Malaria	1951		6	1				5			5	3	1	2	14	37
	1952		11	1		2	1	6			14	1		1	4	41
	1953							1								1
	1954							1								1
	1955		1								2		2		1	6
	1956							1			1	1			1	4
	1957		1		1											2
	1958		1	1				1			2				1	6
Rocky Mt spotted fever	1951										1					1
	1955	2			1			1								4
	1956			1							2					3
	1957													1	1	2
Typhus	1956										1					1
Tularemia	1953				2			4	1	1						8
	1954				2			4	1	1						8
	1955									2						2

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Anatomical Factors in Surgery of the Biliary Passages

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SURGERY of the biliary passages is done for symptomatic disease due to inflammation, obstruction, or tumors. Removal of the gallbladder has been recommended for the patient with stones in the gallbladder, although it functions well without symptoms of gallbladder disease. Removal of the gallbladder with stones in a patient who can tolerate surgery will avoid the possibility of gallstone colic; symptomatic acute or chronic cholecystitis; hydrops, empyema, or gangrene of the gallbladder; perforation with diffuse or localized peritonitis; obstructive jaundice, cholangitis, hepatitis, biliary cirrhosis; gallstone ileus; pancreatitis; symptomatic cardiac irregularities; or carcinoma. When any of these complications or sequelae of gallbladder disease is present, an operation appropriate to the nature of the local disturbance and the condition of the patient is indicated.

The patient who submits to surgery for removal of the gallbladder should be assured of recovery and freedom from the symptoms for which the operation is performed. The success or failure of this venture depends on five essential factors.

1. Diagnosis. The presence of stones in the gallbladder is not positive evidence that gallbladder disease is responsible for the patient's complaint. Neurologic, hematologic, arthritic, cardiac, pulmonary, or other abdominal conditions may be responsible for symptoms that simulate those of gallbladder disease. Removal of the gallbladder without recognizing other diseases that are responsible for symptoms is not apt to bring relief.

2. Adequate surgery. Incomplete removal of a diseased gallbladder or retention of a large segment of the cystic duct may be responsible for recurrence of symptoms. Failure to explore a common duct containing stones, or to establish adequate patency of the ampulla due to stricture, tumor or carcinoma in the pancreas or adjacent viscera are reasons why symptoms persist or why new and more serious symptoms develop. Other significant and symptomatic conditions more remote from the biliary passages must not be overlooked.

The importance of abdominal exploration prior to removal of the gallbladder and of the visualization of the structures concerned in its removal must be stressed.

3. Accidents. Injuries to blood vessels, large or small, result in hemorrhage or liver necrosis; and injuries to the hepatic or common ducts, causing leakage of bile or obstructive jaundice, may be followed by prolonged disability or death.

The importance of recognizing the essential anatomy and of maintaining a positive effort to avoid an accident deserves emphasis.

4. Complications. Respiratory, vascular, neurologic and other complications incidental to anesthesia and faulty preoperative and postoperative management prevent complete recovery. The postoperative incisional hernia may be more troublesome than the gallbladder disease for which surgery was performed.

The importance of preoperative care, competent anesthesia and surgery, and effective postoperative management should be emphasized.

5. Noncalculous gallbladder disease. Patients in this group are notable for the poor results which frequently follow cholecystectomy. It has

been estimated that less than 25 per cent are benefited by surgery. Thus, it is necessary to evaluate this group with a view to selecting for surgery those who are not relieved by appropriate medical management. Faulty eating habits and improper dietary selections must be corrected in some, while antispasmodics, antacids, bile salts, and sedatives must be given to others before relief from symptoms is obtained. Improved bowel habits, rest, relaxation, "peace and quiet" are helpful for all. A prolonged trial period of medical management will eliminate the large number in this group who are not apt to be helped by an operation. The remainder will require surgery. In this smaller group, unsuspected small stones, chronic gallbladder disease without stones, stenosis of the ampulla, chronic pancreatitis, or neoplasms may account for the patient's symptoms. Such patients will be helped after appropriate surgery is done.

This group properly should be considered under diagnosis but, more importantly, emphasis is placed on the careful selection of cases for surgery, especially of those in whom obstruction of the cystic duct or stones in the gallbladder are not demonstrated.

The Operative Procedure

Abdominal wall incision. Anatomic factors related to the abdominal wall incision are its size and the degree of exposure it affords. The incision should be long enough to permit a wide exposure of the field. This will allow: (1) exploration of the neighboring abdominal viscera; (2) visualization of the anatomy concerned in the operation; and (3) manipulation necessary for removal of the gallbladder, probing of the ducts when necessary, and control of bleeding that may be due to accident or disease.

Whether the surgeon prefers the oblique, transverse, or longitudinal incision is not as important as the size of the incision. With satisfactory illumination of the field and gentle, careful retraction by an assistant who is aware of his responsibility not to injure the tissues, most of the accidents that occur can be prevented.

Incisions adapted to the contour of the abdomen take advantage of the good features of each and avoid the disadvantages (Fig. 1). Any avoidable disability is too high a price to pay for a small, inadequate visualization of the field.

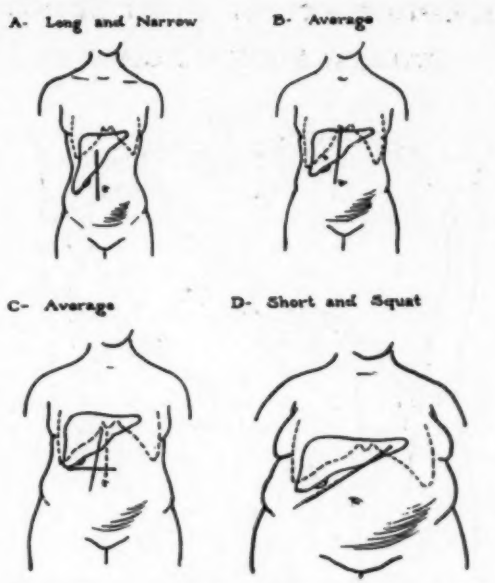

Fig. 1. Selection of an incision adapted to the shape and size of the torso provides a selective exposure. No one incision is universally applicable to all patients when adequate exposure is the purpose.

Exploration. While injuries of the ducts and blood vessels frequently are caused by inadequate or faulty exposure, many patients fail to recover completely with relief from symptoms because of inadequate exploration. In spite of what is regarded as a complete preoperative examination, some intra-abdominal pathologic conditions which produce symptoms, or which interfere with recovery are not detected before surgery. Roentgen studies, too, are not always revealing. However, when the abdomen is opened, a visual or palpatory exploration can be made to detect significant pathologic conditions which can be corrected immediately, or which indicate the need for special postoperative medical care or further surgery (Fig. 2).

Exposure of blood vessels and ducts. Accidents involving blood vessels and ducts may be immediately fatal or result in prolonged disability before recovery takes place. In some patients, recurrent disabling episodes ultimately result in such changes in the liver that recovery is impossible. Thus, one small error may change a prospective good result into a failure, and a patient who might have enjoyed good health is committed to a long period of disability.

EXPLORATION PRECEDING GALLBLADDER SURGERY

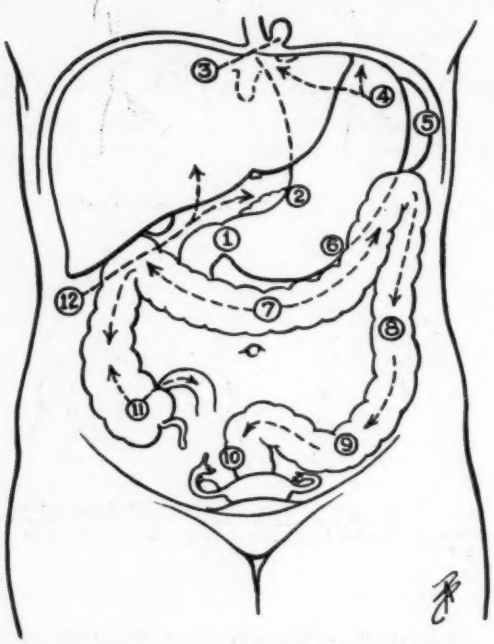

Fig. 2. Sequence of abdominal exploration to detect other conditions or disease concomitantly present in the abdomen. The gallbladder with stones may be asymptomatic. If this gallbladder is removed, persistent symptoms will result to which the term "postcholecystectomy syndrome" is frequently but erroneously applied.

A distended gallbladder is an anatomic hazard. It obscures the ducts and vessels, interferes with exploration of the regional anatomy, and adds to the danger of its removal. The distended gallbladder should be aspirated of its fluid content and emptied of its stones. This aids in visualization of the field and avoids the forceful emptying of stones into the common duct. To facilitate further exposure of the ducts and vessels, the neck of the gallbladder is elevated, and the cholecystoduodenal ligament is opened. The peritoneal edges of this opening are carefully separated until exposure of the extraperitoneal space in which the major ducts and vessels lie is sufficient. Additional mobility of the gallbladder may be obtained by incising the serosa on its lateral aspect and elevating the neck of the gallbladder from its bed in the liver. The common, hepatic, and cystic ducts may now be inspected and the cystic artery or arteries isolated.

Bleeding from torn tiny vessels which obscures the field is controlled by the application of a warm, moist pad with mild compression until the field is dry. This avoids the danger of accidents.

The blood vessels. Cystic arteries vary in number from one to four. All of them should be ligated when it is established that they enter the gallbladder. In an obscure field, the closer to the gallbladder vessels are ligated, the lesser the risk that hepatic vessels will be injured or occluded.

The gallbladder is held to the liver not only by its serosal covering, which is continuous with Glisson's capsule, but also by a cystic artery. This is demonstrated by the ease with which the gallbladder is removed after the cystic artery is severed. During surgery, lateral traction on the neck of the gallbladder causes the cystic artery to become taut. It can now be palpated as a "wire" and thus identified. It is usually in association with a lymph node which may obscure the view. Unless care is taken, the vessel may be torn or mistaken for a fibrous band and cut. This can be avoided by ligating the cystic artery soon after its exposure and severing it close to the gallbladder. This permits greater mobility of the neck and cystic duct with less risk of hemorrhage and a better view of the larger ducts.

The cystic artery or arteries may arise from any branch of the celiac axis of the aorta, the superior mesenteric artery, or the aorta itself. While the cystic artery comes most often from the right hepatic artery, its origin from a large vessel at some distance from the gallbladder may subject it to injury during the act of retraction of the viscera adjacent to the gallbladder. This further emphasizes the need for care in the initial phase of cholecystectomy when the viscera are exposed and the field is opened to view. Medial and inferior displacement of the duodenum with retraction by a hand or instrument may compress a torn vessel arising from the superior mesenteric artery and prevent bleeding. After the retractor is removed, the operative field may fill with blood and prolong the procedure, or bleeding may follow closure of the abdominal wall in the early postoperative period and result in shock.

There is a particular danger when a vessel is cut or torn, and retracts out of view in the field.

The accumulation of blood obscures ducts and vessels, and an impulsive application of a forceps in this field in an effort to control bleeding is a frequent cause of injury to these structures.

By inserting the left index finger into the foramen of Winslow, the hepatic artery can be compressed with the left thumb in the many patients whose structural arrangement permits this to be done (Fig. 3). The blood can now be aspirated and the field irrigated with isotonic salt solution. Removal of this fluid by suction clears the field. The surgeon can then see the extent of injury and secure the bleeding point.

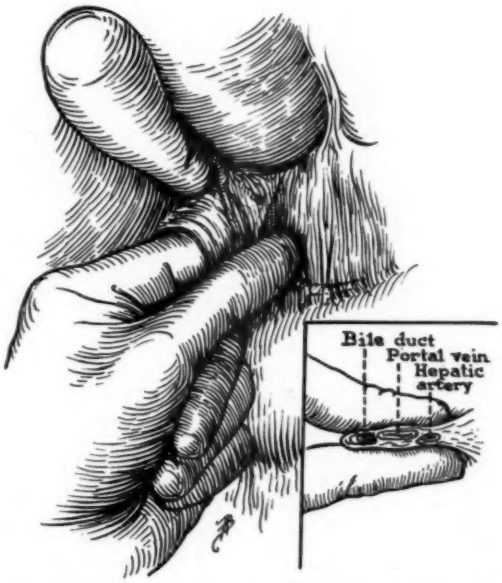

Fig. 3. Method for the control of bleeding from a branch of the hepatic artery when this vessel lies in the free edge of the lesser omentum.

The ducts. The length of the cystic duct varies considerably. The extremely short ones are less than a centimeter in length and favor injury to the hepatic and common ducts. The mildest traction on a gallbladder with a short duct favors "tenting" of the other ducts, so that the application of a clamp occludes more than the cystic duct. Other cystic ducts are as long as the gallbladder itself. Frequently a long cystic duct and the hepatic duct lie side by side for one, several, or many centimeters before they unite to form a common duct. It is less hazardous for the patient to have the contiguous portion of the cystic duct remain, for complete excision of a cystic duct attached to the hepatic duct may be more injurious to the long hepatic duct, duodenum, or pancreas.

It is better to avoid clamping the cytic duct in almost all instances. The duct can be exposed more readily with careful, blunt dissection, using a fine tipped Mixter forceps or any of its modifications, and applying a ligature directly to the cystic duct at right angles to its axis in full view of the common and hepatic ducts.

The cystic duct usually has the narrowest caliber of all the extrahepatic ducts, and its surface is "corrugated" or irregular because of small, leaf-like projections within its lumen that extend in a spiral throughout short ducts. These are the valves of Heister, an embryologic formation usually not found in the distal end of long cystic ducts. These characteristics of the cystic duct are useful in establishing its identity on sight.

Variations in the mode of union of the hepatic with the cystic duct to form the common duct, the occasional union of the cystic with the right hepatic duct, and the right hepatic duct's rare entrance into the gallbladder warrant careful inspection before any duct is ligated and cut.

The location of the hepatic duct is constant. It lies at the bottom of the quadrate lobe of the

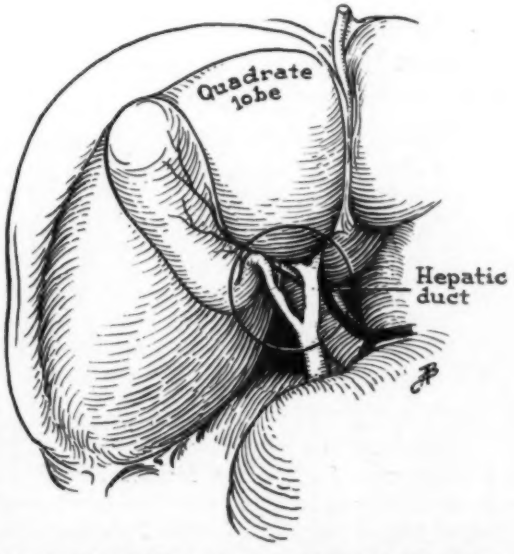

Fig. 4. Quadrate lobe and location of hepatic duct. In 88 per cent of patients, the duct emerges from the posterior extremity of the quadrate lobe. In 12 per cent, ducts emerge along margin of quadrate lobe, sometimes close to the fossa of the gallbladder (Anson).

liver. This lobe is bounded by the gallbladder fossa on the right, the round ligament on the left, the anterior margin of the liver superiorly, and the hilus, where the larger vessels enter and the hepatic ducts leave the liver. If this fact were more generally known, serious injuries to the hepatic duct could be avoided. The duct lies behind a layer of peritoneum. The thickness of this peritoneal layer varies with the degree of chronic peritonitis associated with the biliary tract disease. Immediate exposure of the quadrate lobe by traction on the round ligament toward the left and displacement of the body of the emptied gallbladder to the right help to visualize the danger zone in biliary tract surgery (Fig. 4).

Pathologic factors determine the need for exploration of the common duct. Indications are:

1. Palpable stone or stones.
2. Dilated duct – distal obstruction.
3. History of jaundice, or chills and fever.
4. Thickened duct (chronic cholangitis).
5. Contracted gallbladder (stones already evacuated into common duct).
6. Large caliber cystic duct with many stones and biliary "mud" in the gallbladder (stones and "mud" in the common duct, too).
7. Palpable tumor in the duodenum at the ampulla (duodenotomy indicated).
8. Gastric surgery – duodenal lesion encroaching on the common duct.
9. Chronic pancreatitis – stricture or compression of the common duct at the ampulla or in the intrapancreatic portion.
10. Postcholecystectomy. Cholangitis, pancreatitis, hepatitis, biliary cirrhosis, jaundice (in the absence of other causes for the clinical symptoms and findings), persistent biliary fistula, persistent epigastric pain, weight loss with or without chills, fever, or jaundice.

As a safeguard in exploration, aspiration of bile is an assurance that the portal vein has not been mistaken for the duct. Mobilization of the duodenum by incision of the parietal peritoneum on its lateral margin and caudad displacement of the hepatic flexure of the colon facilitate manipulation necessary to explore the duct, expose the ampulla of Vater, or repair injured ducts.

Aberrant ducts are occasionally seen and, when not involved in the removal of the gallbladder, should remain undisturbed. More often, they are not recognized and may be injured during cholecystectomy. Fortunately, few of the ducts drain sufficient bile to cause serious postoperative complications. However, they account for some cases of bile peritonitis.

Abdominal "drainage". Bile leaking from the wound after surgery may be caused by injury to an accessory duct rather than to improper ligation of the cystic duct. This can occur even in the simplest case when the liver is partially rotated out of the abdomen and a short accessory duct is torn off. The hazard of injury to an accessory duct without knowledge that it has been torn or evulsed is present in every case.

Some of these ducts are narrow in caliber and may be injured during cholecystectomy. Subsequently, a large amount of bile may accumulate in the subphrenic or subhepatic spaces.

Careful closure of the gallbladder bed in the liver by suture of the "flaps" of the serosa and the subserosa in the liver bed helps to occlude vessels and ducts in this raw surface and assures a dry field.

Some surgeons of wide experience and good judgment do not use drains as routine practice after cholecystectomy, and state that they have no cause to regret this omission. However, many others are convinced that it is better to insert a drain and risk a useless application with a good result than to omit it and risk a subphrenic accumulation of bile, blood, or peritoneal fluid.

A drain should not be a substitute for careful surgery. Hemostasis, the closure of openings in ducts, and the suture of leaking bile channels lying in the gallbladder bed of the liver prevent the accumulation of blood and bile in the subhepatic space. A hernia practically never results when the drain leaves through a stab wound on the right side below the costal margin.

Abdominal wall closure. A common hazard in gallbladder surgery is the development of a postoperative incisional hernia. This may be due to faulty healing from one or several of a variety of causes or to malocclusion of the layers of the abdominal wall. While the causes of faulty healing are well known and can be guarded against

by proper nutrition, prevention of infection, and avoidance of distracting forces on the suture line, the anatomic factor of complete and accurate closure of the posterior sheath of the rectus muscle with its transversus muscle, transversalis fascia, and attached peritoneum needs constant emphasis (Fig. 5). Failure to suture accurately this important layer is frequently the fault of inadequate abdominal wall relaxation.

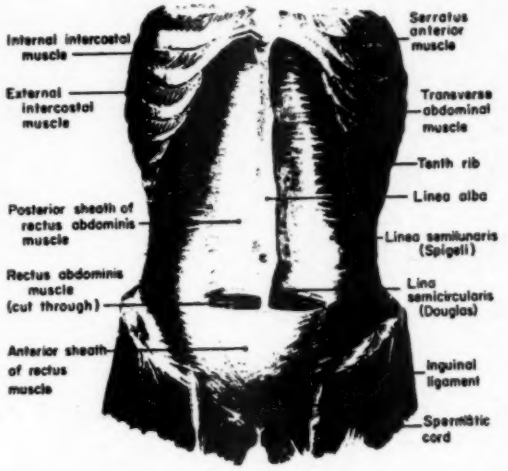

Fig. 5. The transversus muscle and the posterior sheath of the rectus muscle. Failure to suture securely this layer is responsible for postoperative herniation. Muscular relaxation is necessary to approximate the cut edges, since muscle contraction draws the lateral cut edge behind the rectus muscle and prevents approximation of the cut edges.

In some instances when the abdominal wall is thin, the transverse parallel fibers of the transversus muscle and its aponeurosis split apart during closure of this layer. This defective closure may be avoided by correct placement of the closing suture. A lock stitch pulled snugly at right angles to the transverse parallel fibers, while the edges of the wound are pushed toward the suture, will approximate bundles of fibers and maintain a snug closure.

Attention to the details of closure is well worth whatever additional time is required to restore the integrity of the abdominal wall. Suture materials should hold the tissues in approximation until healing is well established. Nonabsorbable sutures for fascial closures are best.

Anesthesia in an amount sufficient to relax the abdominal musculature is needed, and closure of the incised wound should not be attempted until this is established. At this stage, some anesthetists use muscle-relaxing agents to facilitate the closure. These agents are useful, but the hazard of decreased respiratory excursion and anoxia warrants constant vigilance to be sure that the patient can breathe well in the immediate postoperative period. A clear airway, with adequate oxygenation of the blood by artificial pulmonary ventilation, is a requirement until the patient regains control of respiration and is out of danger.

Summary

Surgery of the biliary passages has attained a high state of refinement. Results are excellent in most patients with biliary tract disease.

Hazards in surgery of the biliary tract are present from the moment the initial incision is made until the last suture is placed. Pathologic changes and variations in anatomy contribute to these dangers. The location and size of the abdominal wall incision are factors that determine the ease with which surgery on the biliary passages may be accomplished. The importance of abdominal exploration to determine the presence of coincidental pathologic conditions is emphasized. In a well-exposed and illuminated field, all structures may be visualized and the risk of injury to vessels and ducts is minimized. The importance of the quadrate lobe is emphasized.

There is no substitute for care and skill. It is better to take time to perform the operation well than to hurry and risk an accident. Secure closure of the abdominal wall to prevent herniation is an essential part of the procedure.

"Postcholecystectomy syndrome" includes a variety of conditions that have been specifically described. It is not an entity, and should not be referred to as such in the surgical literature.

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1. Innerfield, I.: Clinical report cited with permission
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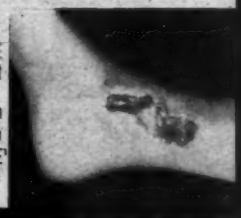

INFLAMMATORY DERMATOSIS

rapidly spreading
rhus dermatitis
healed within
a week[1]

INFECTED LACERATION

marked reversal
in 3 days...
returned
to school...
closure advanced[1]

THROMBOPHLEBITIS

back on his feet
in a week after
recurrent episode[1]

REFRACTORY CELLULITIS

normal routine
resumed after 4 days
of VARIDASE[1]

Radical Mastectomy in the Treatment of Cancer of the Breast

Miguel Castellanos, M.D.
and
Jose Guerrero Santos, M.D.

OVER 50 YEARS ago, Halstedt defined the surgical principles for the proper resection of breast malignancies in the early stages. These principles were based on the resection of the affected organ, its primary lymphatic vessels, and the regional lymph nodes in the axilla. Thousands of patients have been cured when this approach has been implemented at the proper time. Cancer of the breast can be 90 per cent curable by radical mastectomy in its early stages. However, this figure decreases rapidly when the surgical procedure is delayed until after the malignancy has metastasized to the regional lymph nodes. Sugarbaker and Urban proved clinically and histologically that often the primary tumor spreads first along the internal mammary chain particularly when the lesion is located in the areolar margin or in the inner portions of the breast. These workers also showed that out of every 100 cases in which metastases were found in the axilla, at least 30 showed metastases in the internal mammary chain as well. Therefore, the key to the effective treatment of breast malignancies would lie in some technique by which the breast, the lymphatic channels and nodes of the axilla as well as those of the internal mammary chain could be resected "en bloc."

Many techniques have been devised and tried in more or less large numbers of patients. In the Tumor Clinic at Guadalajara we considered Dr. Urban's technique as the most reasonable and logical one. For the past two years, we have tried it on six cases and in this report we give our own conclusions as to its practicability, and complications encountered. We shall not attempt to make a long term appraisal of this method, because we have not managed enough cases, and our experience is relatively very short.

In principle, the technique consists in performing a radical mastectomy after sectioning the tendons of the pectoralis major and minor at their insertions. After cleaning the axilla, the lateral cutaneous flaps of the mammary tissue are separated and then the thorax is opened through the first and fifth intercostal spaces, ligating the internal mammary vessels at this level. The lung, the mediastinum, and the internal mammary chain are then explored. The presence of metastases in any of these structures precludes radical surgery and the patient is considered incurable. A simple mastectomy is done as a palliative procedure, and to facilitate postoperative radiation.

In those cases in which we strongly suspect metastases, we proceed to open the thorax first and if pulmonary metastases are encountered, as is often the case, any contemplated radical procedure is immediately abandoned. If the case is considered suitable for ligation of the internal mammary vessels, a sternotomy is performed with a Lebschke knife joining the first and the fifth intercostal spaces. Bleeding from the sternum is controlled with bone wax, then the cartilaginous portions of the second and fifth ribs are cut and the breast, the associated tissues of the axilla, the pectoralis major and minor, the internal mammary chain as well as the sternum and the costal cartilages are all resected "en masse."

The defect left by the resection of the sternum is covered with a piece of fascia lata which is obtained by a surgical team working on the patient as soon as the radical approach is decided upon.

Complications

The six cases treated at our clinic by this technique have tolerated the procedure well, and the immediate postoperative course has been uneventful. We have cut down the operative time to between two-and-a-half to three hours. Between 500 and 1000 cc. of whole blood have been

needed in each case. The length of the hospitalization period in these cases has been longer than in those treated by the conventional radical mastectomy because the underlying circulation available to the skin flap covering the defect left on the sternal area is obstructed by the presence of an avascular tissue like the fascia lata. Necrosis and ulcerations are wont to occur and prolong the recovery period and the hospital stay. However, this is not a serious complication in spite of the psychological trauma to the patient. Local treatment of the ulcerated areas is usually sufficient to handle these cases.

Conclusions

(1). The technique described offers definite advantages and is the procedure of choice in handling cases of malignancies located in the areolar zone or in the inner quadrants of the breast tissue. It should be done in all patients whose general condition is otherwise good.

(2). Complications in this type of surgery are minimal and present no major hazard to the life of the patient.

(3). In those institutions in the United States where this technique has been used, there is a considerable amount of enthusiasm with the realization that it is much too early to make a just appraisal of the method.

Summary

Advances in anesthesiology, blood transfusion, and antibiotic therapy have made possible more extensive radical surgery in cancer in a way which, up to now, has been unexpected.

The "en bloc" resection of the diseased organ, the lymphatic channels, and the axillary and internal mammary nodes have been shown by Urban and others to be feasible with few complications and a low mortality rate in the treatment of cancer of the breast.

At the Cancer Clinic of Guadalajara we have used Urban's technique in six cases of breast cancer.

We have been impressed by the low incidence of complications in the postoperative period in spite of the extensive surgery performed. Even with our very limited experience we feel there is a place for this type of surgery, particularly in those tumors in the medial quadrants of the breast.

Mastectomia Radical Con Vaciamiento De Mamaria Interna En El Tratamiento Del Cancer Del Seno

Dr. Miguel Castellanos

Dr. Jose' Guerrero Santos

Hace más de 50 años, que Halstedt estableció los principios quirúrgicos para la correcta extirpación del Cáncer Mamario en sus primeros estadiós evolutivos. Estos principios tomaban como base, la extirpación en bloque del órgano invadido, de las vias linfáticas primarias y de la estación linfáctica axilar. Muchos miles de enfermos han sido curados cuando a tiempo se les ha aplicado correctamente esta técnica quirúrgica. En el primer estadío clínico evolutivo del Cáncer Mamario, la curabilidad por medio de la intervención quirúrgica a grado de que si en este porcentaje de curabilidad disminuye rápidamente mientras mas tardía sea la aplicación de la intervención quirúrgica a grado de que si en el examen Histopathológico de la pieza extirpada se encuentran metátasis malignas ganglioanares de la lesión mamaria, la curabilidad disminuye al 50% después de 5 años. Después de los cuidadosos estudios Histopatológicos y clínicos hechos por Sugarbaker y Urban, se ha llegado a la conclusión que en muchas ocasiones, las metástasis del tumor primerio no son de inmediato en la axila, sino que un cierto número de tumores, tienen tendencia a invadir primeramente la cadena ganglionar de la mamaria interna, muy en especial aquellos tumores situados en la parte mal del seno, en los límites de la areola o bien, en los cuadrantes internos de la mama. Así mismo estos estudios revelaron que de cada 100 casos que ya presentaron metástasis en la axila, cuando menos 30 las presentaron también en la cadena mamaria interna. En consecuencia, el paso siguiente consistió en formar una técnica en

la que pudieran ser extirpados en bloque, el órgano invadido, las vías linfatícos de la axila y de la mamaria interna y las cadenas ganglionares linfáticas de la axila y de la mamaria interna.

Muchas técnicas han sido ideadas y estudiadas en series mas o menos grandes de enfermos. En la Clínica de Cáncer de Guadalajara, al considerar este problema, nos impresionó como la más lógica y razonable, la técnica ideada y practicada por el Dr. James Urban. Desde hace 2 años, an la Clínica de Cáncer hemos practicado esta técnica en 6 enfermos y el presente reporte se refiere a nuestras impresiones sobre la practicabilidad de la misma y las complicaciones que hemos encontrado. En lo que se refiere a resultados, consideramos ser nuestra experiencia tan pequeña y el tiempo de observación tan corto, que nos abstendremos de presentarlos ante Uds.

En principio, la técnica consiste en practicar una mastectomía radical que debe iniciarse con el tiempo del vaciamiento axilar, previa sección de los tendones de inserción, de losmúscu los pectorales mayor y menor. Una vez hecha la limpieza axilar, se procede a separar los colgajos cutaneos laterales del tejido mamario y enseguida se entra al tórax a través del 1° y 5° espacios intercostales, haciendo una ligadura a este nivel de los vasos mamarios internos. Enseguida se explora el pulmón, el mediastino y la cadena mamaria interna. La presencia de metátasis pulmonares en cualquiera de estas estructuras, contra indica la cirugía radical en cualquiera de las formas y en tal caso se considera el páciente incurable y en forma paliativa se practica una mastectomía simple para facilitar la radiación postoperatoria.

En algunos casos en que sospechamos la presencia de metástasis, se abre el tórax como el primer paso y tenemos varias observaciones en que esto ha sido de gran utilidad, pues de inmediato se encuentra una metástasis pulmonar que contra indica cualquier procedimiento radical. Si se considera el caso adecuado para el vaciamiento de la mamaria interna, se procede a practicar una esternotomia por medio de cuchillo de Lebschke, uniendo el primero con el 50 espacios intercostales. La hemorragia del esternón, se cohibe con cera de huesos y se procede luego a seccionar los cartílagos costales del 2° y 5°, ex tirpando en masa la mama, el tejido celular de la axila, los músculos pectorales mayor y menor y la cadena mamaria interna, junto con el esternon y cartílagos costales.

El defecto ocasionado por extirpación del esternon y cartílagos costales, es reparado por medio de fascia lata, previamente extraída a la paciente por un Team quirúrgico que empieza a trabajar en ésto, desde el momento en que se acepta en definitiva el tratamiento radical.

Complicaciones

Los 6 enfermos que hemos intervenido con esta técnica, han tolerado el precedimiento perfectamente bien en el post-operatorio immediato. El tiempo operatorio hemos logrado estabilizarlo entre 2½ y 3 horas. La administración de sangre varía entre 500 y 1,000 c.c. El tiempo de hospitalización post-operatoria ha sido mas larga en estos enfermos que en los de mastectomía radical por el problema del colgajo cutáneo central, que al encontrarse en contacto con un tejido avascular injertado como es la fascia lata, dificulta su nutrición y se presenta con cierta frecuencia la necrosis de esta porción de la piel. Ha sido esta la única complicación seria que si no amenaza en lo más mínimo la vida del infermo, prolonga la convalescencia por la zona de ulceración que atemoriza al enfermo y le impide dejar el Hospital. Sin embargo esta complicación se ha resuelto exclusivamente con curaciones locales dado que los 3 casos en que se ha presentado han cedido espontaneamente sin necesidad de injertos posteriores.

Conclusiones

(1). La técnica de que hablamos presenta ventajas indiscutibles, para aquellos casos de tumores localizados en la zona de la areola a los cuadrantes internos de la mama y creemos que debiera intentarse rutinariamente en aquellos enfermos en buen estado general, que presentan este tipo de lesiones.

(2). Las complicaciones de este tipo de Cirugía son mínimas y no presentan mayores riesgos para la vida del paciente.

(3). En las Clínicas Norteamericanas en donde se utiliza este procedimiento en forma rutinaria en gran número de casos existe gran entusiasmo por sus resultados aún reconociendo que se encuentra en período experimental y que pasarán varios años y muchos cientos de enfermos tratados en esta forma, antes de que podamos saber su verdadero valor en el tratamiento del cáncer mamario.

Post Coarctation Hypertension and Arteritis: Its Possible Etiology

REPORT OF TWO CASES

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From the Thoracic Surgery Services of The St. Joseph's Hospital
and
The Crippled Children's Hospital, Phoenix, Arizona

THE syndrome of post coarctation arteritis was first reported by Sealy in 1953(1). Since that time, at least five deaths have been ascribed to this condition,(1, 2, 3, 4) three secondary to intestinal gangrene, and two due to hemorrhage. This study is a report of two cases and a comment on the physiopathology and possible etiology of this disease.

Report of Cases

Case 1. K. G. a 15 year old white male, was admitted to St. Joseph's Hospital for repair of coarctation of the aorta. Symptoms included bilateral frontal headaches of five years duration, and leg muscle cramps of one year duration. On auscultation, the brachial artery pressure was 215/105 mg. Hg., and on direct tracing, the femoral artery pressure was 90/70 mm. Hg., mean of 80. No physical evidence of collateral circulation was present. Chest x-ray revealed an enlarged left ventricle with absence of rib notching. Electrocardiographic report was left ventricular hypertrophy. On Dec. 8, 1957 a coarctation of the aorta was resected and the aorta repaired by an end to end anastamosis. Trimethaphan Camphor Sulfonate* and hypothermia to 91°F. were employed as adjuncts to the procedure. The immediate post operative course was complicated by atelectasis of the left upper lung. The brachial artery blood pressure on the first post-operative day was 90/70 and on the second day, 110/68. (Fig. 1) On the third post-operative day, the brachial artery pressure was 170/110 and the femoral artery pressure was 210/120. A leukocytosis of 25,900 and a fever of 102°F. were ascribed to the atelectasis. On the fifth post-operative day, the white blood count was 13,750 and the temperature was 101°F. with a concomitant resolution of the atelectasis. However, the onset of cramping mid-epigastric pain, accompanied by abdominal distention was noted. Increased peristalsis was present, and nausea and vomiting were subsequently observed. On the sixth post-operative day, the white blood count was 17,300. On the seventh post-operative day, roentgenologic study revealed gastric and small bowel distention with massive edema of the intestinal wall. (Fig. 2) A diagnosis of post corarctation arteritis was made. Intravenous Rauwolfa Serpentina†, 0.5 mgms. every four hours was administered and naso-

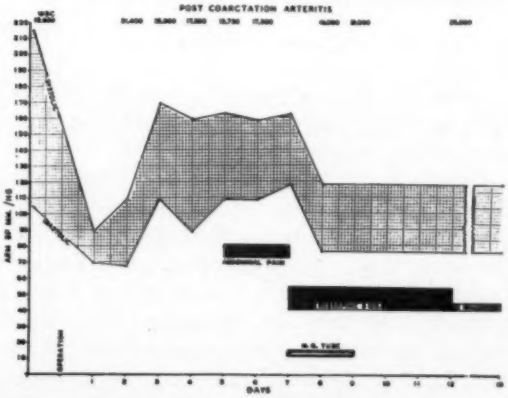

Fig. 1. Case K. G. Severe post coarctation arteritis.

*Roche (Arfonad).
†Ciba (Reserpine).
Direct Tracing data obtained by Dr. Hugh Hull, Director, Cardiopulmonary Laboratory, St. Luke's Hospital.

gastric intubation was instituted. On the eighth post-operative day, the white blood count was 41,900. Abdominal pain ceased on the ninth post-operative day, after which the intestinal tube was removed. A gradual reduction in brachial artery pressure was noted and on the 12th post-operative day, the dosage of Reserpine was reduced to 0.25 mg. every six hours. On discharge, 16 days following surgery, brachial artery pressure was 140/85. However, femoral artery pressure remained 200/110. Reserpine was administered orally for one month following discharge. On physical examination the lower portion of the body was poorly developed and there was no evidence of collateral circulation. The molar teeth were strikingly enlarged, being almost adult in size. Chest x-ray revealed enlargement of the left ventricle with absence of rib notching. Electrocardiogram was interpreted to show minimal right ventricular hypertrophy. On Aug. 5, 1959 the coarctation was excised and an interrupted suture repair performed. A small patent ductus was present and divided. At the end of surgery emesis occurred, and a naso-gastric tube

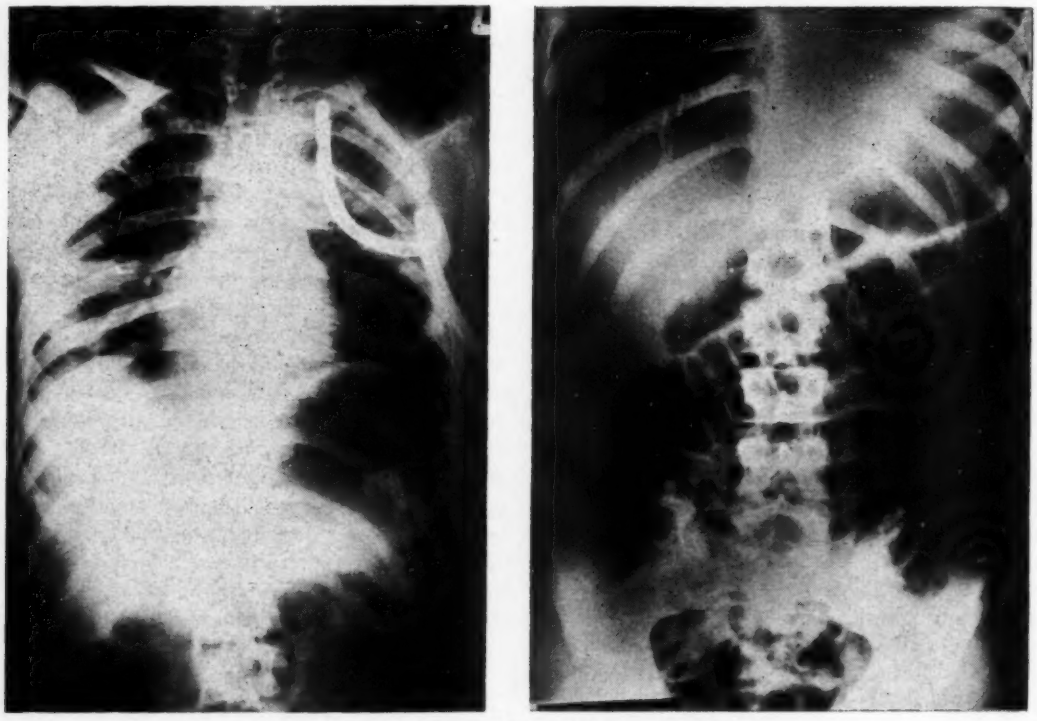

Fig. 2. Case K. G. Gastrointestinal distension with intestinal edema.

examination, two months after surgery, the left brachial artery pressure was 130/100 and the patient was without complaint.

Case 2. B. P., a six year old white male, was admitted to the Crippled Children's Hospital for a repair of an aortic coarctation. Symptoms included headache and recurrent asthmatic bronchitis. At age five, malgrowth of incisor teeth had required an extraction. On direct tracing, the brachial artery pressure was 140/60 mm. Hg., mean of 98, and the femoral artery pressure was 86/70 mm. Hg., mean of 78. On was inserted. The brachial artery pressure on the first post-operative day was 120/88. (Fig. 3) On the second post-operative day the brachial artery pressure was 135/95 and the femoral artery pressure 150/85. Abdominal distention was noted despite Wangensteen suction. Active peristalsis with passage of flatus was present. Roentgenologic study devealed gastric and small bowel distention with edema of the intestinal wall. (Fig. 4) Post coarctation arteritis was diagnosed and it was decided to withhold oral feeding and intensify naso-gastric suction. Gastroin-

testinal symptoms continued for 48 hours, but by the fifth post-operative day, brachial artery pressure was 130/80, white blood count was 11,200 and the gastric tube was removed. On the 17th post-operative day, the brachial artery pressure was 110/70. Moderate abdominal distention was still present, being more pronounced in the latter part of the day with almost complete recession during the night. Elimination remained normal and abdominal distention finally disappeared one month after surgery.

Comment

Possible theories as to the etiology of this syndrome have included: Stimulation of the adrenal medulla due to sudden increase in local blood supply(5), occurrence of periarteritis nodosa due to a hypersensitivity reaction(2), and finally, general vascular spasm in response to sudden exposure of the distal arterial system to a high intravascular tension(2, 5). This latter theory is logical, but does not explain the limitation of the arteritis to a small percentage of post-operative coarctation patients. A difference in the size of the tunica media of the aorta, in that it is relatively thicker proximal to a coarctation than it is distal to it(6), has recently been confirmed by Heath and Edwards(7). In a previously unpublished study, inactivity induced degenerative changes in the tunica elastica of the pulmonary artery distal to a valvular stenosis in the tetralogy of Fallot had been noted(7). However, in the study of coarctation tissues by Heath and Edwards, a relatively normal tunica elastica was present in the distal aorta. When measured, the absolute femoral pressures in this series also approached normal. In the usual coarctation, because of the presence of a relatively high femoral diastolic pressure(8), the absolute blood pressure in the aorta distal to the involved area approaches normal(7). Accordingly, Heath and Edwards stated that structural changes in the tunica elastica would not usually be expected. However, they also state that examples of structural degeneration of the tunica elastica might be observed if a relatively low mean blood pressure were present in the distal aorta. Here "inactivity induced changes in the elastic tissue of the media" could occur secondary to the lowered vascular tension.

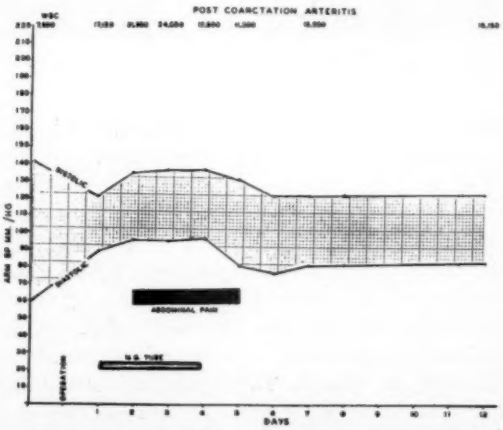

Fig. 3. Case B. P. Moderate arteritis, low pre-operative diastolic blood pressure secondary to associated patent ductus.

This excellent pathological study by Heath and Edwards(7), suggested a possible explanation for the occurrence of arteritis in a limited percentage of post-operative coarctation patients. When a relatively normal, absolute femoral pressure is present, probably related to either a moderate type coarctation, or to an excellent collateral circulation, an adequate tunica media and elastica should be present in the distal aorta and the hemodynamic changes secondary to removal of the coarctation would be well tolerated. Contrariwise, when a high brachial femoral absolute pressure difference with a low absolute femoral pressure is present, probably related to either an extreme coarctation or to moderate type coarctation with minimal collateral circulation, a thinner tunica media with a degenerative type tunica elastica may occur. The hemodynamic changes secondary to surgery may then be less well tolerated. Reflex arterial spasm could develop with generalized hypertension, systolic and diastolic in nature, progressing to a distal arteritis. Ischemia, particularly severe in the anatomically unsupported mesenteric vasculature, might occur, and, if untreated, terminate in intestinal gangrene. Support of this theory may be present in the two presently reviewed patients in whom a difference of 51 mm. Hg. average in the brachial and femoral, pre-operative absolute blood pressure was present, and no collateral circulation was observed. In four normal subjects studied by Brown(8), using a strain gauge manometer, the average brachial-femoral absolute pressure difference was 0 mm. Hg. A comparison of this normal difference with four patients reported by

Sealy(5) to show severe "late" arteritis may further support the present theory of etiology. The average pre-operative brachial-femoral absolute pressure difference in the "severe" group was 49 mm. Hg. These measurements were derived from separate brachial and femoral pressures listed by Sealy and exclude two patients in the "severe" group where diastolic femoral pressure was unobtainable. However, inclusion of these two patients would further elevate the absolute difference in the "severe" group. Finally, in case mortalities of this syndrome submitted to autopsy, necrosis of the arterial media, restricted to vessels distal to the anastomosis has been a prominent factor(4).

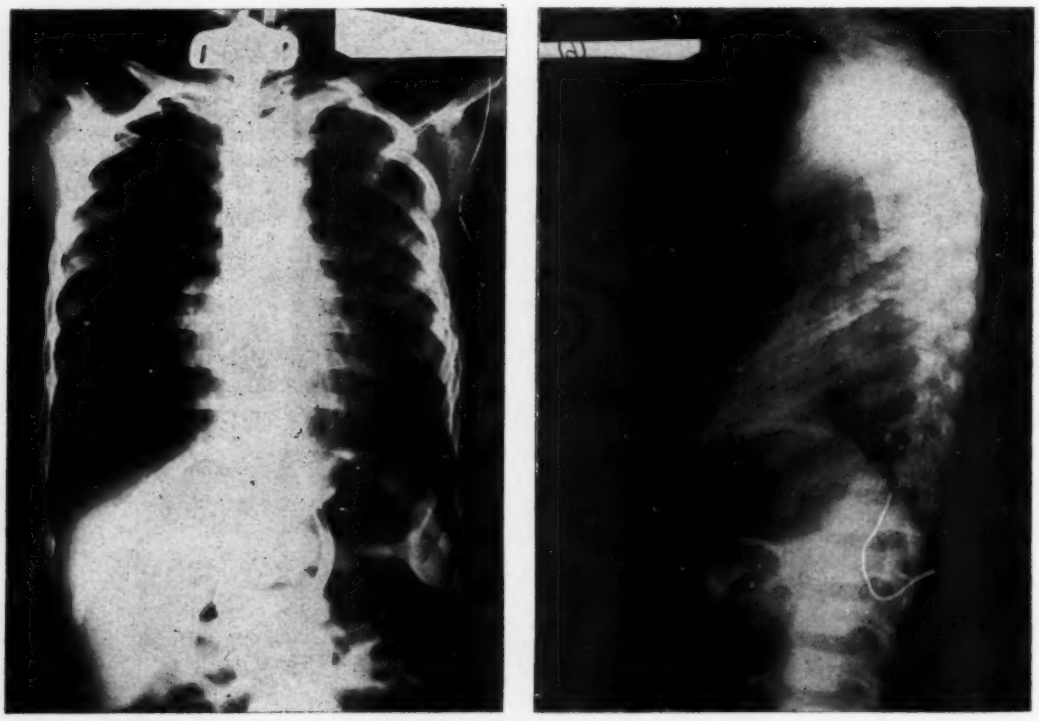

Fig. 4. Case B. P. Gastrointestinal distension with intestinal edema despite naso-gastric decompression.

Careful Evaluation Important

Anatomical confirmation of this theory is necessary, but in the interim it would be expedient to evaluate carefully all candidates for surgical correction of coarctation of the aorta for objective evidence of an adequate distal arterial system. This should include direct tracing of brachial artery and femoral artery blood pressures with careful observation of the mean brachial-femoral difference. If this were found to be high, in conjunction with minimal or absent collateral circulation, and in particular with absence of notching of the ribs in older children and adults, it would be expedient to observe carefully for the post-operative development of this deleterious syndrome and combine pre-operative intestinal sterilization with early post-operative use of anti-hypertensive drugs.

The syndrome itself seems to vary in its severity. This may be ascribed to individual patient variance in the mean arterial pressure proximal and distal to the coarctation. The more severe or malignant type of post coarctation arteritis may be anticipated in a male(9) patient in whom a marked pre-operative disparity between the brachial and femoral diastolic or mean blood pressure has been recorded and in whom, in addition, evidence of collateral circulation is minimal or absent. The syndrome would be initiated on about the third post-operative day by a rise in the brachial and femoral systolic and,

in particular, diastolic arterial pressures. This would be followed in 24 to 48 hours by intermittent mid-epigastric pain accompanied by active peristalsis with frequent flatus. At about this time, a progressive leukocytosis with low fever would be recorded. Roentgenologic study of the abdomen would reveal intestinal distention and edema. Untreated, and in its more malignant form, this syndrome then may progress to necrosis of the intestine, particularly the small bowel, or possibly cause rupture of the anastomotic suture line or a vessel distal to the previous coarctation. If treated, in its milder aspect by intestinal intubation and antibiotics, or in its more malignant form by the addition of antihypertensive agents, such as Reserpine, a complete remission would be expected. However, progressive leukocytosis and pain with persistent abdominal distention might necessitate a laparotomy for excision of compromised bowel.

Summary

The seriousness of the post-coarctation arteritis syndrome is noted. Report is made of two cases in which treatment was successful. A theory as to the physiopathological development of this syndrome is postulated. The clinical and laboratory findings of possible value in prognosticating the occurrence of the more malignant type of this syndrome are outlined, and the clinical syndrome and its accepted treatment are reviewed.

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NEW ANTIBIOTIC TREATS ENTERIC INFECTIONS

Experimental studies of paromomycin, a new antibiotic of streptomyces origin, were reported by Fisher *et al.*, of Parke, Davis & Company. They found that it inhibits a wide variety of bacteria in vitro, being notably active against proteus but relatively weak against pseudomonas. A tuberculostatic effect was reported in guinea pigs. Cross-resistance was observed with kanamycin, neomycin, and, variably, with streptomycin.

Courtney and Thompson, of Parke, Davis & Company, pointed out that paromomycin is not absorbed from the gut but that it is a potent nontoxic amebicidal agent. In therapeutic trials in fourteen hundred patients, the authors found that paromomycin is well tolerated and is effective against chronic and acute intestinal amebiasis and some types of bacterial enteritis.

(from Seventh Annual Antibiotic Symposium, Nov. 4-6, 1959, Washington, D. C.)

DERMATOLOGISTS PRAISE GRISEOFULVIN

The new fungistatic antibiotic, griseofulvin, was described as "a major advance" in the treatment of superficial mycoses. Among the enthusiastic comments on this new agent was the observation that griseofulvin now makes X-ray treatment of tinea capitis obsolete. It was emphasized, however, that griseofulvin is effective only against fungi of the trichophyton, microsporum, and epidermophyton groups.

Stressing the importance of positive laboratory identification, one investigator pointed out that "all ringlike lesions are not ringworm, and not all ringworm produces ringlike lesions." Dosages used by reporting investigators averaged 1 Gm. daily. Length of treatment ranged from four to sixteen weeks, depending on the type of skin involved. Nail infections required up to twenty-four weeks of therapy.

(from Seventh Annual Antibiotic Symposium, Nov. 4-6, 1959, Washington, D.C.)

"Every three and one-half days we live on earth, we get enough whole body (and hence also gonadal) radiation to equal that from a single 14" x 17" X-ray, which is on the order of .0012 r ,male)."

Dr. Robert G. Zach and Mr. David S. Goodman

Coccidioidomycosis in Animals

Dr. Raymond E. Reed, D.V.M.

Professor of Animal Pathology
University of Arizona, Tucson

The following abstract concerning "A Study of Coccidioidomycosis in Animals" was furnished by Doctor Raymond E. Reed, D.V.M., professor of animal pathology at the University of Arizona, Tucson. This project is one of the many being pursued at the university and having a direct bearing on basic problems of medical interest. We are grateful to Doctor Reed for this abstract and hope he will keep us informed of future developments in this project.

A. J. B.

SINCE the discovery of coccidioidomycosis, its laboratory diagnosis has included inoculation of susceptible animals. Natural infection of many species has been observed and reported from time to time in various periodicals, the papers usually reflecting interest generated by chance encounter of coccidioidal lesions in slaughter animals or necropsy specimens. In recent years, the tempo of discovery and the number of animals involved has increased, making it obvious that the disease is far from rare in several mammals other than man.

"A Study of Coccidioidomycosis in Animals" is a project initiated in 1952 by the Department of Animal Pathology of the University of Arizona. It is supported by State Research funds along with a grant-in-aid from the National Institutes of Health, U. S. Public Health Service. The original objectives of the project were to develop methods for recognizing the disease clinically in dogs, to evaluate methods for confirming diagnosis short of necropsy, and to determine the pathogenicity of coccidioidomycosis for cattle. These broad objectives have been achieved for the most part, but new questions have grown from findings, and they have been kept in the outline.

A start toward antemortem recognition of canine coccidioidomycosis had been made by a few Tucson veterinarians before work began on the project. Dogs with chronic respiratory disease marked by coughing and fever frequently failed to respond when treated with various antibiotics or sulfonamide drugs. After euthanasia and necropsy, many such dogs were found to have coccidioidal granulomas in lungs and bronchial lymph nodes. Careful study of hospital records kept on over 100 confirmed cases of canine coccidioidomycosis provided a complete and varied picture of the severe phases of the disease. It was found that infected dogs were sensitive to coccidioidin if used undiluted, and that complement fixation titers could be determined, and had about the same significance noted in the human disease. Climbing titers occurred in progressive infections, while static or declining titers were found when the dog was holding his own or recovering. Precipitins appeared in serums from some dogs, but not predictably. Dense shadows at the hila of the lungs represented graulomatous and indurated bronchial lymph nodes and served as good indications of the nature of the respiratory difficulty. As information accumulated and the various diagnostic techniques were employed, the diverse manifestations of progressive cocciodioidomycosis were recognized. Veterinarians in

Arizona, between 40 and 50 per cent of whom respond each month by filling out an animal disease morbidity card, now report over 200 cases of progressive canine coccidioidomycosis a year. Differentiation of primary coccidioidal infection from other canine respiratory diseases is being made with less and less difficulty.

Observations

For approximately a year, work on the project included an attempt, with a physician and a pathologist, to reproduce in the dog the fan-shaped pulmonary lesion seen radiographically in about one-third of human primary infections. Ten dogs inoculated by intratracheal insufflation with coccidioides spores failed to develop this type of lesion, as indicated by periodic radiography and lung biopsy.

Two years were devoted to investigating pathogenesis of the disease in experimentally infected dogs, graded doses of spores being given to three age groups of dogs, after which the animals were observed for development of disease signs, complement fixation and precipitin titers, and coccidioidin sensitivity over a 12-week period. Surviving dogs were sacrificed for necropsy.

Dogs heavily infected with spores by the pulmonary route and treated with amphotericin B administered intramuscularly, failed to develop measurable serum levels of the antibiotic, and the disease was not halted in treated dogs compared with infected but untreated control animals. Similarly infected dogs receiving amphotericin intravenously quickly developed fatal uremia unless the antibiotic was considerably diluted and given only on alternate days. Dogs that received the drug intravenously developed appreciably high blood levels, and the disease could be held static for as long as 20 days.

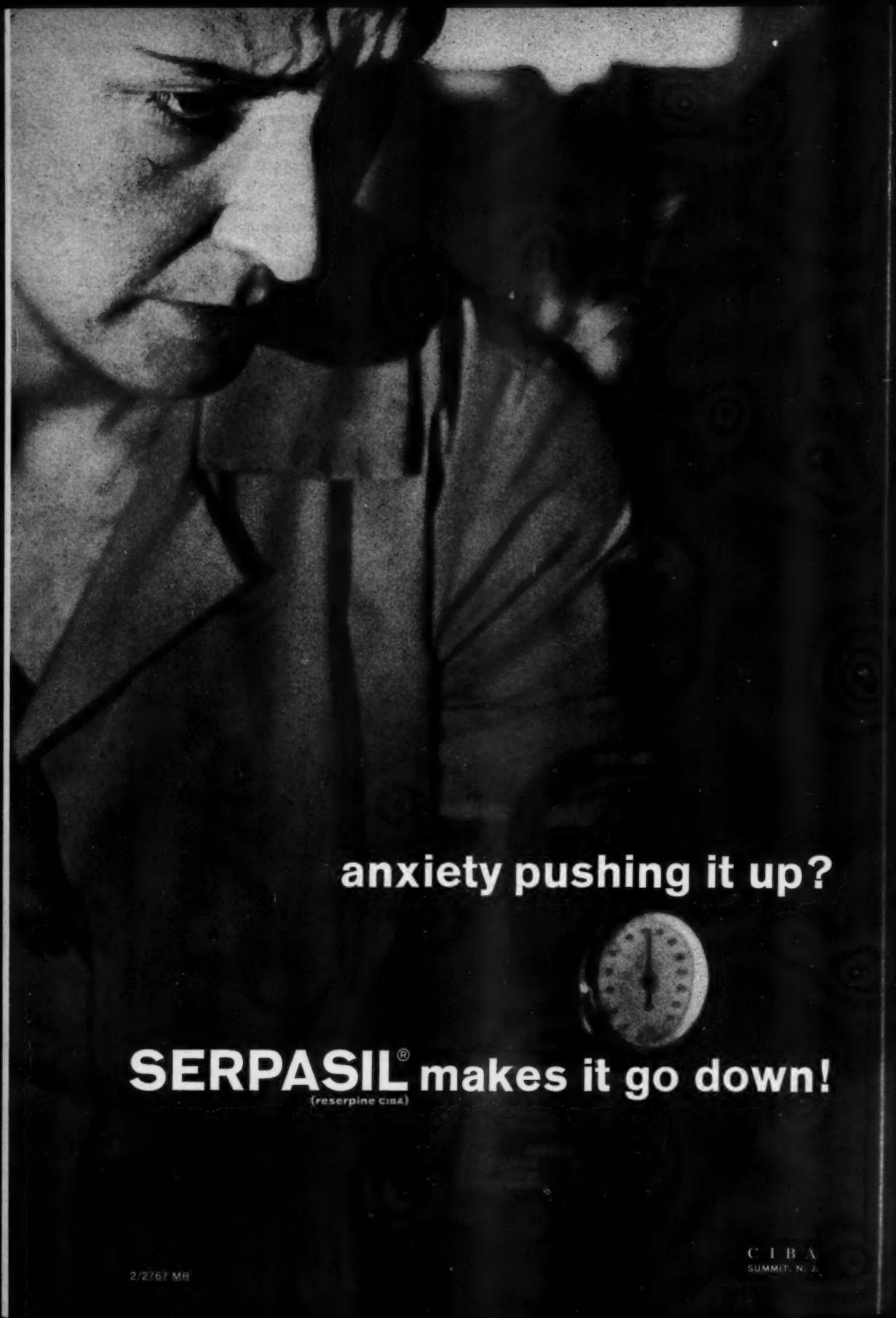
Many of over 20 spontaneously infected dogs treated with amphotericin given intramuscularly or intravaneously showed temporary improvement, only to have signs of advancing disease return. It has not been possible to say that any dog in this group received permanent benefit from the treatment.

Extremely limited supplies of another antibiotic, eulicin, have been available for intramuscular administration to a few spontaneously and experimentally infected dogs. Too few animals have been used because of difficulty in obtaining the antibiotic to make conclusions possible, but there are indications that this product is less troublesome to administer and that progress of the disease is interrupted during treatment. Toxic properties have not been noted at the dose level and interval employed.

Cattle slaughtered after fattening in southwestern feedlots harbor coccidioidal granulomas in thoracic viscera in important numbers of the total killed, but signs of disease are lacking. Ninety-three calves and yearlings of both beef and dairy breeds have been inoculated by spraying from 500,000 to 1.5 million viable arthrospores of *Coccidioides immitis* into the trachea. Over periods of 90 to 130 days of observation, all inoculated animals remained free of disease signs. At slaughter, a few granulomas were found in lung or thoracic lymph nodes, but evidence of infection was completely lacking in most animals.

The project has made interesting co-operative study of the disease possible, the attempt to produce certain lesions seen in man by experimental infection of dogs serving as an example. Practicing veterinarians participated enthusiastically in the phase involving diagnostic methods. Soil isolations of *C. immitis* by public health workers have followed diagnosis of the disease in pet dogs. In one instance where a high rate of infection persisted among dogs in a breeding kennel, neighboring soil was found to harbor the fungus, and two persons living close by had incurred clinically manifest disease. Part of the cattle used for experimental inoculation and control were provided by a rancher whose interest in "Valley Fever" developed from a severe infection experienced by his daughter. The cattle inoculation and antibiotic evaluation trials were approved and supported in part by the Arizona Tuberculosis Association and were conducted jointly with a U. S. Public Health Service veterinarian, Dr. Keith Maddy.

This project is being continued for several reasons. There are many facets of pathogenesis still to be examined. Development of a vaccine seems worthy of some effort. Clinical evolution of antimycotics is slow and difficult to interpret without animal trials. It is hoped that considerable outside support for the project will continue to be available.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Editorial

ARIZONA MEDICINE

THIS IS the first issue of ARIZONA MEDICINE published directly by The Arizona Medical Association. The past months and years have seen many unnecessary difficulties with our past contract. Possibly it should be explained that the Journal has been published under a contract which provided sixty pages of print with no profit or loss to the Association. It could not enforce cooperation by the publisher. It allowed no operating expenses for the Association or the editorial staff.

Starting with this issue, The Arizona Medical Association will serve as its own publisher. During the transition there may be difficulties — possibly more than our share of mistakes.

An active interest and participation by the members of the society would do much to improve ARIZONA MEDICINE. We encourage more articles from the members of this Association. We will cooperate in their publication. There will be no charges for the production of cuts. Reprints are to be available for the cost of printing.

We hope to give you an improved journal which, while being a non-profit publication, will care for its own costs with an improved content, makeup and distribution.

DWN

ARIZONA MEDICINE

Journal of

The ARIZONA MEDICAL ASSOCIATION, Inc.

AND

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication — Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unusued manuscripts.
8. Illustrfations — Ordinarily publications of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

(The opinions expresed in the original contributions do not necessarily express the opinion of the Editorial Board.)

LAW SUITS HARRY BRITISH

DID YOU read the above titled article which appeared in the A. M. A. News? If you did, try it again.

"If you think malpractice litigation in the United States is bad, take a look at what the British physician must endure.

Under the government-run National Health Service, a Legal Aid Committee helps indigents bring action against doctors or hospitals if the patient's claim of medical negligence appears to be valid."

"Latest 12 month statistics show:

Local legal aid committees considered 26,662 applications of which they accepted 16,046.

3,223 cases were tried in the Queen's Bench Division, with 2,671 verdicts returned in favor of the plaintiff-patient.

According to a member of the AMA Law Division the 5-out-of-6 ratio in favor of the plaintiff "is fantastic."

Quoting the Lord Chancellor, Lord Kilmuir, an editorial in the Medico-Legal Journal notes:

"It must be recognized that one of the by-products of the National Health Service has been to expose hospitals and individual surgeons and physicians to a greater risk of litigation."

This is just another one of the barbs, to be swallowed, if we continue to stand so complacently, while we are socialized.

LBS

PARAPLEGIC CARE

THE ARTICLE in this issue — "Paraplegic Care and Rehabilitation," extols the virtues of highly specialized centers, for the prolonged care and rehabilitation of paraplegics. The reasoning given by the author, for the need of such centers, is well founded.

It is stated that the Veterans Administration already has excellent equipment in centers, with personnel which have established a unique record — it is therefore proposed, that these Veterans Administration Centers, be made available for all paraplegics. It is also pointed out, that in Canada — certain Provinces have solved this problem by Independent Centers, which are used by all agencies, including the Veterans Facilities. The latter method is much more in keeping with the American Free-enterprise democratic systems, than that proposed by the author.

The Veterans Administration is a Governmental agency — it derives its funds from the public trough. By manipulation this body has within its power, the ability to set up other special services, which one by one, could excell — irrespective of the cost. This one-by-one system of addition, could soon engulf the whole practice of medicine.

At the present time, we are allowing the Veterans Administration, to care for almost twice as many non-service-connected, as they do for those liberally designated as service-connected.

Should we continue to expand the governmental control of medical care, by saying, you have a better set up, so take over? The answer is No! — we should in some instances (paraplegics care, as an example) further tap the potentials of the world's greatest system for the practice of medicine, to provide proper medical care for all people. Let us look for guidance to the Canadians, where-in the Independent organizations, services the government.

LBS

CURB NEEDED ON DRIVERS "TOO SICK TO SERVE"

When is a drunk driver not treated like a drunk driver?

When he's sick.

And here, in riddle form, is one of the real problems confronting Pima County judges today, according to information brought out in the Citizen's panel discussion on highway safety and reported in the Citizen yesterday.

A man may be staggering drunk, involved in a serious automobile collision. But when he comes to court, all he has to do is produce a letter from his physician declaring that he is too sick to be sent to jail. So he goes free — "on probation" — and ostensibly feels free to drink and drive without restriction again.

For this, we can't place undue blame on individual physicians, who are placed in difficult spots by old friends or long-time patients. But this medical gimmick is used repeatedly to dodge jail terms for people who are well enough to drink to excess, but too "sick" to pay the penalty.

There is a solution, though, if the Pima Coun-

ty Bar Assn. and the Pima County Medical Society would work it out together.

Why not form a small, impartial medical examining board to rule in such cases? An individual physician could place his client's medical record before the board, which would then decide whether the patient was indeed too sick to serve a jail sentence. The individual physician would be off the hook, and a judge would have a decision he could rely upon.

Repeated examples of "too sick to serve" in recent months have done little to increase the public's respect for medical ethics, so the medical society would be doing a service to its own profession if such a board were formed. And bar association cooperation in this venture would assure the public that the legal profession is doing everything possible to live up to the spirit of laws designed to reduce the ever-increasing death toll on Arizona's highways.

Reprinted from TUCSON DAILY CITIZEN
August 14, 1959

Editor's Note:

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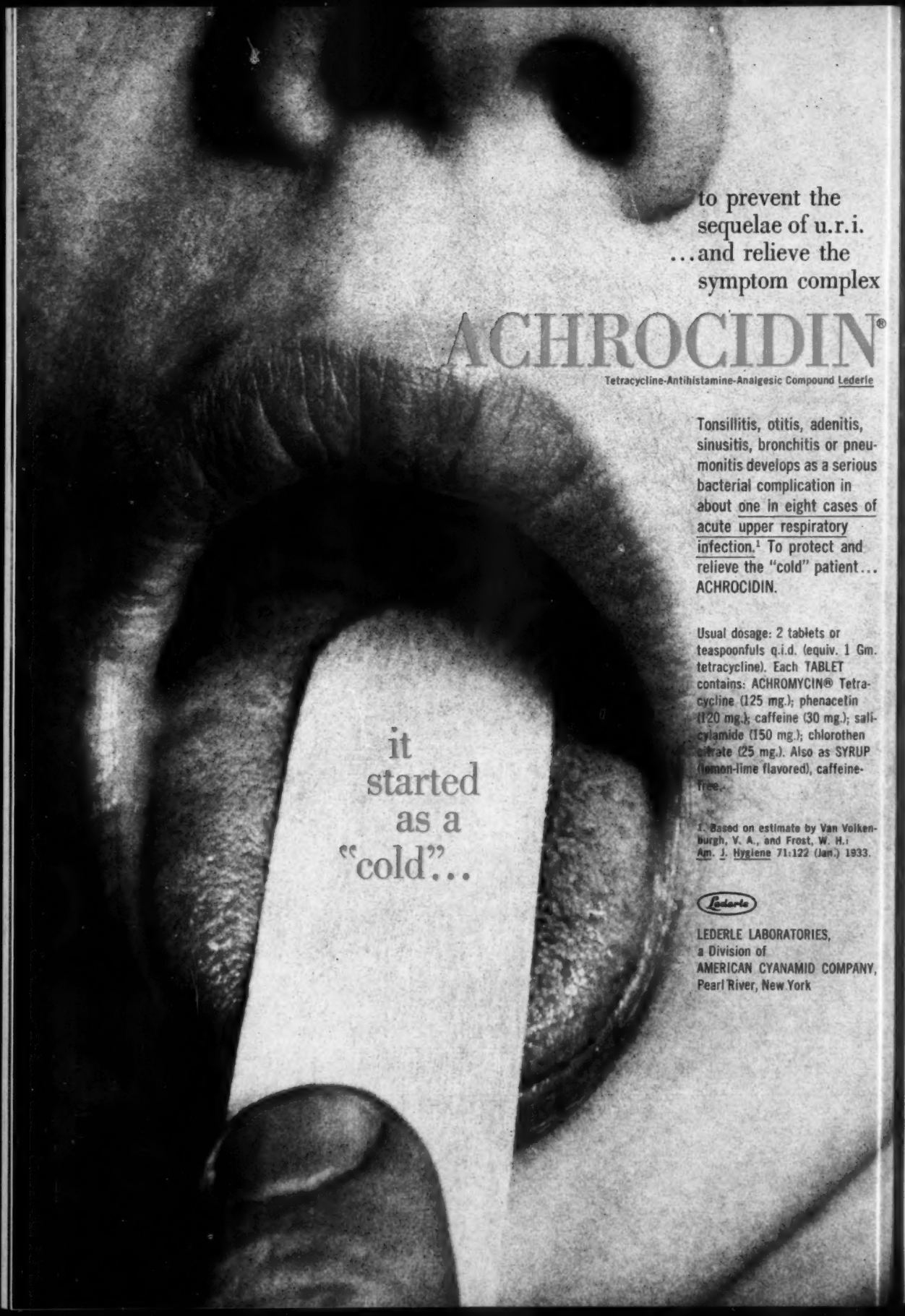

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1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933.

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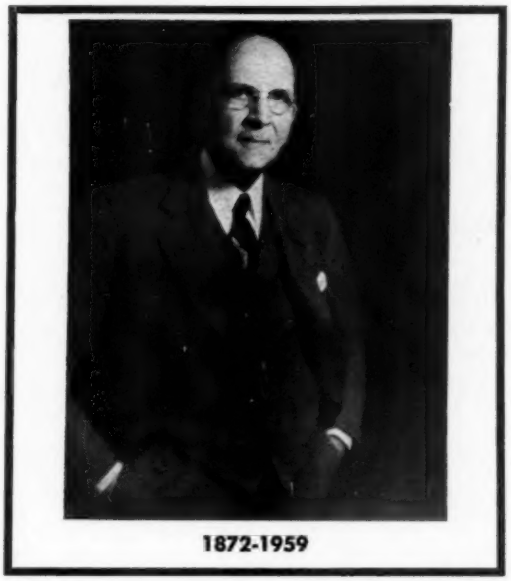
In Memoriam

DELAMERE FOREST HARBRIDGE, M.D.

1872-1959



1872-1959

THE CONTRIBUTIONS of Dr. Harbridge to medicine, to his community, and to the Arizona Medical Society were fruitful, inspiring and model in form and ethics.

It is therefore fitting that the following be reproduced as Dr. Harbridge wrote it several years ago. It gives a concise, complete, an unvarnished enumeration of his many and varied activities. Birth, June 18th, 1872, Racine, Wis. Died Oct. 6, 1959, Los Angeles, California.

Harbridge, Cora Francis, Wife (nee Brown) Philadelphia, Pa.

Married, June, 1901.

Harbridge, Delamere Forest, Jr., Son.

Father: Harbridge, Frederick, born, Cheshire, England, 1837.

Mother: MacRitchie, Mary, born, Dundee, Scotland, 1838, (Father, David).

Three Brothers.

Member Trinity Episcopal Cathedral, (Senior Warden, 1925-1926) Phoenix.

Mason.

Education:

Racine Public Schools, private tutor, German, Pharmacy.

Medical Department University of Pennsylvania, degree M.D., 1898.

Interne St. Mary's Hospital, Philadelphia, Pa., 1898-1899.

Ophthalmology, Preceptor, Wm. Zentmayer, M.D., Wills Hospital, Philadelphia, Pa., 1899-1913.

Professional positions:

Assistant Ophthalmologist, St. Mary's Hospital, Philadelphia, Pa., 1899-1905, Wm. Zentmayer, M.D., Service.

Assistant Ophthalmologist, St. Agnes Hospital, Philadelphia, Pa., 1905-1908.

First Clinical Assistant, Wills Hospital, 1899-1913, Wm. Zentmayer, M.D., Service.

Lecturer: Eye Department, Philadelphia Poly Clinic Post Graduate, 1910-1913.
Wm. Zentmayer, M.D., Service, now department University of Pennsylvania.

Chief Eye Surgeon (organizer) Eye Department, Chester Hospital, Chester, Pa., 1904-1913.

Eye Surgeon Southern Pacific Railroad since 1913 at Phoenix, Arizona.

Supervising Ophthalmologist, Arizona Department Aid to the Blind.

Member of the following Medical Associations:
Philadelphia County Medical Society (Initial Medical Society Membership) October 12th, 1900. Elected Honorary Life Member 1935.

American Medical Association 1902.

Pennsylvania Medical Society 1900-1935.

Maricopa County Medical Society and Arizona Medical Association since 1913.

American Ophthalmological Society, 1918.
West Coast Ophthalmological Society, 1933.
Association of Research in Ophthalmology, 1930.

American College of Surgeons, 1932.

Diplomate, American Board of Ophthalmic Examiners, 1921.

Fifty year Medical Club, 1948 (Arizona)

Officer:

President Delaware County (Penn.) Medical Society, 1908.

Secretary Wills Hospital Clinical Society, 1910-1911.

Delegate Pennsylvania Medical Association, 1910.

President Maricopa County Medical Society, Arizona, 1917-1918.

Secretary Arizona State Medical Association, 1917-1939.

President Elect Arizona State Medical Association, 1939-1940.

President Arizona State Medical Association, 1940-1941.

Councilor at large, Arizona State Medical Association, 1941-1945.

Councilor, Medical Defense, Arizona Medical Association, 1945-1949.

Secretary Board of Managers Southwestern Medical Journal, 1915-1942.

Delegate American Medical Association, 1921.

Literary:

1. Contributed 35 published papers on Ophthalmic subjects.
2. Collaborator of Chapters on Tonic Amblyopia, Tumors of the Eye and Conjunctiva in the Year Book from 1915 to 1927.
3. Chapter on Tumors of the Eye in the Encyclopedia of Ophthalmology by Casey Woods, M.D.
4. Abstractor British Journal of Ophthalmology for the American Journal of Ophthalmology 1916-1943.

As will be noted from the above account, Dr. Harbridge was a long time secretary of the Arizona Medical Association. He related that Dr. Flinn, the pioneer physician of Prescott, came by his living quarters one day and dumped a bunch of books out on the table. Dr. Flinn told him that "You are now the new Secretary of the Arizona State Medical Society." Dr. Harbridge said he protested that he had never attended a meeting of this society and was totally unaware of the organization of it and of his duties. Dr. Flinn allowed as that didn't make any difference and that he, Dr. Harbridge, was the new Secretary and he could start his duties as of then. Dr. Harbridge states that in those days nothing seemed to be very well organized, in fact not a few men thought that the organization was probably not worth while any way. This became a challenge to the members of the State Society and Dr. Harbridge's organization of the secretary's office was indeed a monumental task.

Dr. Harbridge's capacity for public service was expansive and unlimited. In January 1958, the Arizona State Board of Welfare awarded him a special citation. He had served for twenty years as a consulting ophthalmologist to the Arizona State Welfare Department. In this capacity he certified all patients who were to have examinations by ophthalmologists, certified as to the legality of vision for grants and aids, and certified all cases who were to have surgery or other treatment for eye conditions. One of his principal contributions in this respect was the establishment of Regional Eye Clinics in the outlying counties. These were conducted under the direction of the State Blind Services and have now grown so that about nine hundred cases are examined each year in these clinics. These people would not otherwise be examined by a qualified eye physician. This certifying of cases was a tedious task, it involved a review of some 800 to 1500 cases each year. This citation also designated Dr. Harbridge as Supervising Ophthalmologist Emeritus to the State Welfare Board.

The city of Chester, England and Pennsylvania played an important in his life. Doctor's father was born and had been trained as a pharmacist in Chester, Cheshire, England. Dr. Harbridge realized early in life that his father was going to follow the European custom of settling the family inheritance on the eldest son. His father advised him to study pharmacy in his father's business in Racine. This he did, later moved to Milwaukee and then soon after that to Chester, Pennsylvania. Here he engaged in business as a pharmacist and there decided to enter medical school at the University of Pennsylvania.

The pharmacy in Chester where his father trained still operates. As you walk along the old walled city to the north gate, hard by this gate is this pharmacy. It is not designated as a pharmacy but as The Chemist, and this is the same in which Dr. Harbridge's father was an apprentice about the year 1850. You may follow the wall down to the west side of the old city to the river Dee. Chester was a western outpost of the Roman occupation, the Welch to the west resisted both the invasion of their soil and corruption of their language by Latin. Some of you will recall that during World War II parts of an old Roman galley were excavated in an area which at one time had been the harbor at the mouth of the river Dee.

Dr. Harbridge was a voluminous reader and collected a large library of medical literature. On his retirement he presented to the State Library and Archives, in the Capitol Building, a complete bound set of the last fifty years of publication of the Journal of the AMA. Many other speciality journals were contributed to the Maricopa County Medical Library.

Dr. Harbridge was a staunch supporter of organized medicine. His philosophy was laid down in his Presidential address which he delivered before the Arizona Medical Association at the annual meeting in Tucson, April 18, 1940. The following are excerpts from this address:

"An impartial study of our professional ethics will reveal that they are inspired by the Golden Rule, are *not* against public policy, and *not* a matter of sharply defined rules of conduct, but of fair dealing between physicians and their patients . . . I would remind . . . critics that "Medicine exists for the benefit of the afflicted, and not the afflicted for the benefit of medicine." If American medicine is to be saved from disaster, it must be through organized medicine, and the individual physician must be prepared to play his part or take the consequences . . . Half truths, illogical deductions, insidious innuendoes, and their like, can only be met by refutations and counter activities that give the lie to them . . .

He concluded in this way "Here is your organization. Use it. Serve it . . . Organized medicine must hold firm to its democratic course . . ."

"Some ships strike East,
Some ships strike West
While the self same breezes blow,
It's the set of the sail
And not the gale,
Which bids them where to go.
Like the winds of the Sea
Are the waves of Fate,
As we journey along through Life:
It's the set of the Soul
That determines the goal
And not the calm or the strife".

Delamere Forest Harbridge set a high standard of personal and professional conduct for those of us who follow.

JOHN W. KENNEDY, M.D.

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Miller, R. F.: Clin. Rev. 1:10 (July) 1958

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Arizona Medical Association Reports

BOARD OF DIRECTORS MEETING

MEETING of the Board of Directors of The Arizona Medical Association, Inc., held Sunday, October 11, 1959.

CENTRAL OFFICE ADVISORY COMMITTEE

Central Office Relocation

The Central Office of this Association has been relocated in new quarters, Suite 1021 Central Towers North, 2727 North Central Avenue, Phoenix, Arizona, occupying 1381 square feet on a 5-year term lease duly executed at a monthly rental of $431.56 ($3.75 per square foot) plus taxes. This rental is to be shared by the Board of Medical Examiners — State of Arizona to the extent of $135.00 per month and ultimately, when the Arizona Medicine Journal publication is assumed by the Association January 1, 1960, a proper proportionate charge against such operation will be similarly exacted based on occupancy of space required therefor.

The Board of Directors and the Board of Medical Examiners were polled by telephone, prior to consumation and execution of the lease aforementioned, and by unanimous action, each member approved the relocation of its offices as above indicated, effective October 1, 1959, on the terms indicated, and the Board of Directors authorized execution of the lease in behalf of the Association by its President and Secretary.

Central Office Services

Doctor Stapley reported that after a thorough study of the activities of the Central Office by the Central Office Advisory Committee, the following recommendations are presented for Board consideration and approval:

1. The central office of the Arizona Medical Association be directed to limit its activities in serving subcommittes to the call of meetings, meeting reservations, supplying information pertinent to the function of these committees, and to distributing reports and minutes of these meetings.
2. All subcommittees to be advised to elect or appoint from their membership a secretary to prepare any minutes of their proceedings, or reports of their deliberations. Subcommittees are to transmit such reports to the parent Standing Committee for recommendations to the Board of Directors.
3. All requests for called meetings and reservations by committee chairmen must be placed at least two weeks prior to the date of such meeting.
4. Central office shall continue to serve the functions and affairs of the Standing Committees as may be required, including, of course, the Board of Directors. However, executive secretaries shall not be required to attend Standing Committee Meetings simultaneously unless requested to do so by the committee chairman.

In addition to these recommendations, there are several notations by members of the committee to the effect that even the major Standing Committees should do as much of their own paper work as possible, and that, perhaps, tape-recorded minutes are not necessary at all committee meetings. Very definite feelings were expressed to the effect that an unnecessary load has been placed on our executive secretaries by demanding their attendance at all Standing Committee Meetings. The recommendation that subcommittees appoint secretaries and keep their own records might also be applied to some of the Standing Committees.

In the over-all operation of the central office, it is apparent that if all demands and requests made are met by our present staff, they will have difficulty keeping our affairs in order. We hope, by more clearly defining the services which they may be required to give to our committees, to relieve, at least in part, what some of us consider to be an excessive burden.

It was moved, seconded and unanimously carried that the report of the Central Office Advisory Committee be accepted and its recommendations put into effect.

Retirement Plan — Key Executives

The following Resolutions were considered and duly adopted by the Board of Directors:

WHEREAS, Robert Carpenter and Paul Boykin are each, through his efforts, abilities and managerial skills contributing substantially to the success and welfare of this Association and the termination of the services of either of them would result in a loss to the Association; therefore, it is prudent that this Association indemnify itself against such loss by insuring both the life of Robert Carpenter and Paul R. Boykin for the benefit of the Association:

RESOLVED, That the purchase by The Arizona Medical Association, Inc. of a life insurance policy in the amount of Nineteen Thousand Dollars ($19,000) on the life of Robert Carpenter and Twenty-Two Thousand Dollars $22,000) on the life of Paul R. Boykin from The Equitable Life Assurance Society of the United States with this Association being designated a beneficiary of each of these policies be and is hereby approved, ratified and confirmed and it is authorized that the premium for each of these policies be paid by the Treasurer from corporate funds.

FURTHER RESOLVED, That upon the separation from employment with this Association of either Robert Carpenter or Paul R. Boykin, the policy on the life of each of said executives, less accumulated dividends, shall be offered to such executive for purchase at the price equal to the then cash value thereof.

WHEREAS, this Association has profited by the efforts, abilities and skills of its Executive Secretary, Robert Carpenter, and its Assistant Executive Secretary, Paul R. Boykin, and

WHEREAS, it would be in the best interest of this Association to offer some inducement to both Robert Carpenter and Paul R. Boykin to remain with this Association by making provisions for payment of retirement benefits to them upon their retirement as active employees, and for their families, should either of them die while in the active service of this Association or after their retirement, the following resolution is hereby adopted:

RESOLVED, That the President and the Secretary of this Association are hereby authorized to enter into agreements providing retirement benefits for Robert Carpenter and Paul R. Boykin on behalf of this Association in substantially the form and style of the written agreements attached to and made a part of these minutes.

Savings Accounts — Funds Transfer

The Executive Secretary reported that at the request of the Treasurer, Doctor Yount, Jr., who is unable to attend this meeting, he asks that the Board give consideration to the matter of designation of officer signatures to appear on Association checks when issued requiring transfer of its funds in "Savings Accounts" for use in both the respective General Fund and Benevolent and Loan Fund regular checking accounts of the Association. Currently, only the name of the Treasurer has been authorized to appear on checks issued by the Association. In the instances presented dealing with Savings Account funds transfer only, Doctor Yount feels that such checks should bear the signature of two officers, the Treasurer and possibly the President.

It was moved, seconded and unanimously carried that the signatures of both the President and Treasurer shall appear on all checks issued transferring funds from the respective "Savings Accounts" to the regular checking accounts of the General Fund and Benevolent and Loan Fund of the Association.

BENEVOLENT AND LOAN FUND COMMITTEE

Organizational and Operational Details

Each member of the Board of Directors was previously furnished a copy of the minutes of the Benevolent and Loan Fund Committee meet-

ing held August 23, 1959, setting forth its recommendations as pertains to organizational and operational details.

DOCTOR MELICK: I would first like to read for your information and the record, a letter I received from Doctor Born, Chairman of the Benevolent and Loan Fund Committee, relating to student loans:

"I have revised the loan applications to conform with any possibility. I have decided that interest on the loan will be payable semi-annually until full payment is made with interest to begin on completion of the first year of internship. In the interest of the borrower, the promissory note can be renegotiated. Loans are to be repaid at not less than $1,000.00 per year upon entering into active practice with involuntary military services, residencies, etc., to be given special consideration.

"I contacted the manager of the Prescott Valley National Bank and he advised me that they found it impractical to secure anything more than life insurance on loans. Disability insurance is not necessary for a small loan company so I think we can disregard this.

"I have listed all the applications we have with the progress on each up to now and I am sure you can answer any other questions which may be brought up by the Board of Directors particularly with my files in your hands.

"As far as the individuals that I would like for consideration at this time, it has been recommended by the committee and they are as follows: (interruption for motion) • • • "

It was moved, seconded and unanimously carried that the outline of procedure be approved.

It was moved and seconded that the format for procedure for loans and repayments be approved.

It was moved, seconded and unanimously carried that the aforementioned motion be amended to read: that the format for procedure for loans and repayments be approved with the deletion of the word "involuntary" as used in the phrase: " • • • involuntary military services, residencies, etc. to be given special consideration." relating to repayment of loan.

There being no further discussion on the original motion, question was called and that motion, as amended, was unanimously carried.

Student Loans

DOCTOR MELICK: There are six (6) individuals here, five (5) of whom the Committee has approved. We have letters from the Deans – they're all favorable – and as individuals, we think they are very deserving. We have one individual who is in the same class but who has not been reviewed by the Benevolent and Loan Fund Committee. The names and loans granted or to be granted are:

Leslie J. Belsher, $1,500.00; Charles Fraser, $1,500.00; Kathryn Willingham, $1,500.00; John H. Jarvis, $1,000.00; Manuel Peria, $500.00 (Tuition only); Wagner Shore, $1,000.00.

It was moved, seconded and unanimously carried that we endorse the report of the Committee.

It was further indicated the Committee does not at this time require consultation with William Nerlich, Director, Loan Fund Committee, University of Southern California; therefore, the honoraium appropriated previously by the Board will not be required.

Counsel reviewed the contents of several of his letters, copies of which were forwarded to Doctor Born for the information of his committee, dealing with the loan application and affidavit; execution of a promissory note; and life insurance as a guaranty of the loan.

HISTORY AND OBITUARIES COMMITTEE

Doctor Melick requested the Board's consideration for an appropriate memorial for Delamere F. Harbridge, M.D., recently deceased, who served the Association as its President for the term 1940-41 and as its Secretary for an unprecedented twenty-year period.

It was moved, seconded and unanimously carried that this matter be referred to the History and Obituaries Committee directing it to take appropriate action.

MEDICAL ECONOMICS COMMITTEE

Fee and Contractual Medicine

The proceedings of the meeting of the subcommittee on Fee and Contractual Medicine of the Medical Economics Committee held August 9, 1959, filed with each Board member by letter dated August 11, 1959 were reviewed. It is recommended that the Association accept a $450 relative value factor offered by the Industrial Commission of Arizona on the basis of the Rela-

tive Value Study of the California Medical Association, November 10, 1957, second edition, with the further understanding that "when the anesthesiologist or anesthetist is required to furnish materials for anesthesia, a charge for materials may be made, in addition to the fee provided for the procedure, on the basis of $5.00 for the first hour and $0.75 for each successive quarter hour or fraction thereof." This has been agreed to by the Industrial Commission.

It was reported for the record that the Board of Directors by mail and/or telephone on or about August 11, 1959, approved the recommendations of its Fee and Contractual Medicine subcommittee by a majority vote of fifteen (15) in the affirmative, five (5) not voting being out-of-town and not reachable.

The statement of the Association to appear in the Introduction of the revised Industrial Fee Schedule to be published, previously released by the President, was presented and read.

Medicare

Associate with the Medicare Contract No. DA-49-007-MD-806 there was submitted for execution on the part of this Association by the federal Office of Defense, a supplemental agreement providing for a change in the Joint Directive with reference to continued obstetrical and maternity care after the husband's death, as outlined in ODMC letter No. 10-59, dated August 20, 1959. This proposal has been reviewed by the Arizona Blue Shield Medical Service, the Fiscal Administrator, and is recommended for approval, that agency having executed the instrument as party thereto.

It was moved, seconded and unanimously carried that the President and Secretary be authorized to execute this supplemental agreement in behalf of the Association.

INDUSTRIAL RELATIONS COMMITTEE

The Industrial Commission of Arizona filed with this Association a certified copy of resolution adopted by it in meeting held June 26, 1959, appointing as members of its Medical Advisory Board the membership of the Industrial Relations Committee of this Association, effective July 1, 1959 to continue to June 30, 1960, including Doctors John F. Currin (I) of Flagstaff, Philip G. Derickson (Or) of Tucson, Juan E. Fonseca (NS) of Tucson, Frederick W. Knight (GP) of Safford, Kenneth G. Rew (PN) of Phoenix, and John H. Ricker (Or) of Phoenix. Received and filed.

PROFESSIONAL COMMITTEE

The Professional Committee of this Association in meeting held August 9, 1959, recommended as follows:

1. That the Professional Committee, after extensive study and evaluation of the provisions of H.R. 4700, 86th Congress, more frequently referred to as the "Forand Bill" (which amends the Social Security Act to provide hospital, surgical and nursing home treatment for eligible beneficiaries, principally those over 65 years of age) and examination of the facts, strongly recommends to the Board of Directors that this Association continue actively its opposition to this proposed measure as an impractical and impossible solution to the problems of the aging; and that the Congressional Delegation representing this state be adequately so informed.

Doctor Melick reported on meeting he attended in St. Louis recently, called by the AMA Council on Legislative Activites dealing specifically with the Forand Bill H.R. 4700.

It was moved, seconded and unanimously carried that the recommendation of the Professional Committee in this regard be adopted.

2. After careful consideration of the steady increase in acceptance by medical societies throughout the country (now totalling 25 out of 48 state societies) of the theory of "voluntary insurance" as a means toward meeting at least some of the health needs of the aged, and inasmuch as the Professional Committee feels that it is a fair and equitable way of financing the hospital and medical care of the older individuals, that it be the recommendation of this Committee that the state Association continue acceptance of and further encourage the development and/or extension of voluntary private and Blue Cross-Blue Shield health insurance programs to include individuals 65 years of age and over, even to the extent of providing coverage for rest home or nursing home care as well as for care in the home itself.

It was moved, seconded and unanimously carried that this recommendation of the Profession-

al Committee be accepted.

3. That the Professional Committee reiterate its continuing philosophy of conservatism in approaching the problems of the aging, as previously declared and presented to the Board of Directors.

It was moved, seconded and unanimously carried that this recommendation of the Professional Committee be accepted.

4. That this Professional Committee recommend to the Board of Directors and urge the Association's co-sponsorship of the 9th Annual Cancer Seminar to be held at the Arizona Biltmore, Phoenix, January 14, 15 and 16, 1960.

It was moved, seconded and unanimously carried that this recommendation of the Professional Committee be accepted.

5. That it is both medically ethical and medically desirable that the county societies accept and in principle approve a standard relative value fee schedule for industrial and commercial groups.

It was moved and seconded that such recommendation might better be amended to read that it is medically ethical that the county societies may accept the principle of the relative value fee schedule for industrial and commercial groups, the unit value to be separately negotiated for each group. Eleven votes were cast in the affirmative. The chairman declaring the motion carried.

Considerable discussion ensued, several expressing the view that possibly the House of Delegates should be the appropriate body to consider a matter of such far reaching implications.

WICHE Postgraduate Psychiatry Project

For the record, it was reported that on or about August 13, 1959, by mail and/or telephone contact, the members of the Board of Directors voted, fourteen (14) in favor (six (6) not voting being out-of-town), approval of the recommendation of the Professional Committee supporting the proposal of WICHE to schedule in this area (Phoenix) a psychiatric post-graduate education project for non-psychiatric physicians. Doctor Melick reviewed the details, especially as pertains to the preliminary teaching program arranged for the instructor participants. No financial obligation on the part of the Association is involved.

Aging – Report

Doctor Hamer submitted a lengthy report which was presented and read by the Executive Secretary in his absence dealing with (a) Rocky Mountain Regional Conference held in Denver, May 8 and 9, 1959; (b) Joint Council for the Improvement of Health Care of the Aged which meeting was held Washington, D. C., June 12 and 13, 1959; (c) National Leadership Training Institute held in Ann Arbor, June 24 through 26, 1959; Hearing before the House Ways and Means Committee held in Washington, D. C., during July, 1959, referable to H.R. 4700, the Forand Bill; program of the Senate subcommittee on Aging chairmaned by Senator Pat McNamara (Democrat) Michigan; and progress of the Arizona Steering Committee in preparation for the White House Conference on Aging to be held in 1961 in Washington, D. C., each of which sesions listed and held be attended representing the Association. Already, much has been accomplished but considerably more must be achieved associate with the problems of the aging to realize some of the objectives desirable.

LEGISLATIVE COMMITTEE

Hazardous Substances

The Legislative Committee by previous action recommended introduction into the state Legislature of a model act on toxicity to cover all toxic substances. This is in line with Resolution No. 3, adopted by the House of Delegates, May 3, 1958, recommending provision for a legal requirement of not more than 1% lead content in paints marketed in Arizona on or for toys and nursery furniture or interiors of dwellings. The AMA Committee on Toxicology submitted a proposed "Uniform Hazardous Substance Act" designed as a model for uniform laws to require the declaration of hazardous ingredients and warning statements on the label and in accompanying literature of chemical products. Counsel was requested to give study thereto and develop necessary legislation.

Mr. Jacobson reported that a point had been reached wherein question is raised as to how much of the problem is "legal" and whether, or not, "medicine" should be called upon to determine medical need in Arizona for such legislation. To accomplish the latter it is recognized certain additional data is necessary to adequately evaluate such need and counsel will render a report shortly.

H.R. 4700 – Forand Bill

Doctor Melick reported upon the AMA National Legislative Conference held in St. Louis, October 2 and 3, 1959, attended by him, Doctor Hamer and the Executive Secretary.

DOCTOR MELICK: I would like to say that activities are being directed towards getting the facts down and in the meantime, in trying to engender – I wouldn't say enthusiasm, as a matter of fact I don't think is a matter of engendering enthusiasm, but what I've hoped to do is to really make the individual members of the profession just pretty – mad. It seems to me from what I learned in St. Louis and what I'm learning by trying to wade through this tome on appearances before the Ways and Means Committee that we have to get really mad at this thing and not just merely say that we support it, get out and make a resolution and then not do anything about it.

I have sent telegrams to the Arizona Hospital Association at its Annual Meeting in Flagstaff and by the good offices of Doctor Roy Young plus the telegrams, a resolution was adopted in which they go on record as opposing the Forand Bill.

I think one of the hardest jobs we'll have is convincing the Arizona Nurses Association that they should controvert what their national body has to say on the Forand Bill. I think that they and everybody else who hasn't looked into this very thoroughly has been led astray by their national body because they have told their constituent members that they are not really against the Forand Bill – they never said that in their resolution – but their big-wig in this particular volume actually controverts that statement in just so many words. I'd like to go before the Arizona Nurses Association and get them pretty – mad at their own national association, if possible.

At the meeting in St. Louis they really brought out where we stand and what we have to do to get our job done.

I will say in passing that tomorrow night at St. Joseph's Hospital, a film will be shown, the BBC British documentary film on the British National Health Service, "On Call to a Nation." It is one and one-half hours in length and well worth seeing. I'd like to see this shown at Tucson also.

AMA now has a colored slide film strip in which Doctor Orr dubs in his voice on the Forand issue. It will be available next week and we have been assured a copy which I shall use in my presentation before the Woman's Auxiliary.

Pre-marital Examinations

Doctor Jarrett expressed the thought that, in the light of recently expressed medical opinion, the pre-marital serological examination law should be reviewed and a public admission of error made.

It was moved, seconded and unanimously carried that this matter be referred to the Professional Committee for review and recommendation.

PUBLISHING COMMITTEE

Doctor Neubauer reported on the current status of the plans of for assuming the responsibility of publishing the Arizona Medical Journal.

Doctor Neubauer reported the Publishing Committee recommendations as follows:

1. Purchase of libel insurance for the Journal.
2. We plan to offer to the State Nurses Association a page or two for announcements and include them in the circulation list which will also include internes and residents in the State, the Medical Society of the United States and Mexico, Arizona hospitals, medical schools in the U. S., all State Medical Associations and Journals, military physicians on assignment in Arizona, Arizona licensed physicians practicing outside the state, VA and Indian Service physicians and Arizona medical students.
3. On the advice of the Press Bureau of the University of Arizona and of Mr. Jacobson, our legal counsel, we are not pursuing the course of a contract with our local printer but will work on a guaranteed quotation basis.
4. Rates for local advertising were tentatively established but much of this will depend on our review of such rates with the SMJAB in Chicago.
5. Contracts for local advertising will require an audit of Mr. McMeekin's books if they are obtainable. We plan to contact all local advertisers at an early date to determine length of such contracts and payment therefor.
6. Funds for reprints, especially that directed by the House of Delegates on Medical Education have not been provided. Since the $1,000.00 offered to the Board of Regents

for its study has not to date been utilized, the Publishing Committee would recommend that we could request these funds be used for the publication of the brochure on Medical Education now that the Board of Regents have received a major grant for its study.

It was moved, seconded and unanimously carried that we write the Board of Regents saying that the Association now has an opportunity to make this contribution to the medical school survey and wonders if they would like us to use the $1,000.00 for the publication of these articles.

Doctor Neubauer reported on the AMEF "Arizona Plan" editorial by Doctor Kohl and requested authorization from the Board to expend funds for a reprint thereof to be distributed to the Arizona Pharmacists.

It was moved, seconded and unanimously carried that the Board of Directors approve the expediture of approximately $25.00 to cover the cost of reprints of Doctor Kohl's editorial on the "Arizona Plan" for AMEF.

Doctor Neubauer reported on the problems of the costs of reprints and cuts under the current business management of the Journal for the information of the Board of Directors.

It was moved, seconded and unanimously carried that a separate account be established, bookkeeping and an audit of this bookkeeping at early intervals, authorizing two individuals for signing contracts and checks related thereto, all of this separate for the Journal so that a bookkeeping system may be established in as brief a period of time as possible in order that the Association may know where it stands on the costs thereof.

It was moved, seconded and unanimously carried that the Board of Directors authorize the officers of the Association to transfer $5,000.00 to the Journal Fund on a loan basis, if needed.

PROFESSIONAL LIAISON COMMITTEE

AMEF

Doctor Melick reported that Mr. A. Lee Moore, A. L. Moore & Sons Mortuary, Phoenix, had been invited to appear before this meeting to receive an "award of merit" for his contribution to AMEF, through the nationally adopted Arizona plan.

Mr. Moore did not make an appearance and it was directed that the award be forwarded to him by mail.

Doctor Melick also reported that an "award of merit" for contributions to the AMEF, for the Arizona Pharmacists had been recommended to be given at the 1960 Annual Meeting of this Association and it is anticipated that such award should be made by Doctor Harold W. Kohl.

It was moved, seconded and unanimously carried that such citation be given to the Arizona Pharmaceutical Association at the next Annual Meeting of this Association by a resolution presented through the House of Delegates.

Public Health

Doctor Steen presented and read a statement submitted by his subcommittee on Public Health referable to "mass polio vaccination programs" pointing up that the private practitioners of medicine have a primary responsibility for curative and preventive medical problems for their patients and the community as a whole. The medical societies representing the private practitioners of its various communities are urged to accept this responsibility and to initiate and promote measures to insure that adequate facilities exist for all citizens, either as groups or individuals, to reach the necessary prophylactic measures against preventable disease within their ability to pay.

It was moved, seconded and unanimously carried that this report be accepted and that a letter setting forth this statement be forwarded to each of the county medical societies.

Arizona Board of Health

The term of J. Lytton-Smith, M.D. (Phoenix) as a member of the Arizona State Board of Public Health expires February 1, 1960. Chapter 1, Article 1, Section 36-102, A.R.S. 1956, prescribes that this Association shall submit to the Governor a list of five persons, licensed practitioners of medicine and surgery who have been engaged in the practice of medicine in the state and who have proved themselves vitally concerned with public health, from which we will select one to fill the vacancy for a term of five (5) years. The following nominations were duly made by the Board:

Hugh H. Smith, M.D. (Tucson)
Ben P. Frissel, M.D. (Phoenix)
Orin J. Farness, M.D. (Tucson)
J. Lytton-Smith, M.D. (Phoenix)
James D. Barger, M.D. (Phoenix)

DOCTOR STEEN: I have this letter from Doctor William Ure who is the tuberculosis

consultant for the Pima County Health Department. The letter was written because of the Attorney General's opinion of June 26, 1956, in which he, according to his opinion, advised that financial assistance for the single individual with tuberculosis would be cut off and he wrote me this letter. He says: We are writing you in regard to our conversation relative to the cutting off of single tuberculosis individuals for financial assistance under the tuberculosis control act.

I wonder if this isn't something for the tuberculosis committee of the Professional Committee.

It was directed that Doctor Steen turn this letter of request for assistance over to Doctor Farness in Tucson.

SCIENTIFIC ASSEMBLY COMMITTEE

Doctor Beaton reported on preliminary arrangements and programming associate with the annual meeting of the Association, May 4 through 7, 1960.

DOCTOR BEATON: I just wanted to let the Board know what the Scientific Assembly has had in mind. We have been guided almost entirely in setting-up the format of the next meeting by the results of the questionnaire. Almost universal on the questionnaire was the feeling that they wanted a scientific meeting and that they wanted a higher meeting so arranged that the registrants would be able to visit the scientific sessions as the first consideration. So we made some changes in how we've set this meeting up.

As you know we picked Safari as the site of our meeting. Since they do not have room for exhibits in the hall we are going to have them in a tent and we are making a virtue out of this necessity and we are having the exhibits keyed around the old fashioned medicine show.

We intend to start out Wednesday, the 4th of May, having our Board of Directors meeting that morning; Wednesday afternoon we'll have the first meeting of the House of Delegates; and that night have the Blue Shield Buffet Dinner.

Thursday A.M. starting with a breakfast seminar, scientific sessions will run until 12:30 with specialty luncheons running to 2:30 and the Blue Shield Meetings to be held at 3:00 P.M. That evening will be set aside for specialty banquets, if requested.

Friday starting with a breakfast meeting we will again have scientific sessions until 12:30 with specialty luncheons at 12:30 to 2:30 and our second House of Delegates meeting will be held Friday afternoon. The President's Dinner and Dance will be held Friday evening.

Saturday morning will be scientific sessions, the golf tournament to start at noon and a banquet for the golfers will be held Saturday night.

We are also making the request to the specialty groups that they open their luncheons and banquet meetings to anyone who wishes to attend.

We are trying to key each day with a medical or surgical topic with a number of contributions from various fields to that particular topic. For example, the first day will be on the general topic of orthopedics in pediatrics.

The Committee has made the decision that we will this year have an award paper open to the membership of the Society and we are inviting papers from the members and the best one will be read on Saturday morning as a feature of the meeting and we are going to award some sort of suitable medal and hope this will become an annual thing. We are also assigning two members to discuss each paper hoping this will be a way we can get our state members interested in the meeting. We are shifting our opening exercises on Thursday morning into the middle of that session.

MEMBERSHIP CLASSIFICATION CHANGES

With the revision of the By-Laws adopted by the House of Delegates May 2, 1959, certain membership changes or deletions, of necessity, appear to be indicated.

Maricopa County Medical Society

Rudolph Louis de Luise, M.D., Active — Dues paid for 1959, moved to Golden, Colorado. No resignation or transfer request to date. Drop from Membership December 31, 1959.

Ruth Alice Johnson, M.D., Service — Dues paid for 1959, moved to Lincoln, Nebraska. No resignation or transfer requested to date. Drop from Membership December 31, 1959.

Kent H. Thayer, M.D., Active — Dues paid for 1959, moved to Long Beach, California in 1957. Society advises was in "residency" status. To retain "active" membership status, must be in active practice in Arizona. If engaged in further training (approved residency program) may be eligible

for Associate membership classification; otherwise drop from membership December 31, 1959.

Stanford F. Farnsworth, M.D., Service (Maricopa County Health Director) – Dues paid July 1, 1959, confirmed.

Hubert J. Adler, M.D., Service (VA Hospital) – Dues paid May 13, 1959, confirmed.

Pima County Medical Society

Sidney W. Ballard, M.D., Active – Dues paid for 1959, moved to Nashville, Tennessee in 1950. No resignation or transfer requested to date. Drop from membership December 31, 1959.

Robert T. Pfundt, M.D., Active – Dues paid for 1959, moved to Hines, Illinois in 1958 for residency training in Anesthesiology at the VA Hospital in Hines, to return July 1, 1960. Membership status to be changed to Associate January 1, 1960, if no further change in status.

Charles N. Sarlin, M.D., Active – Dues paid for 1959, moved to Beverly Hills, California in 1956. No resignation or transfer requested to date. Society advises doctor intends to remain in California. Drop from membership December 31, 1959.

Benson Bloom, M.D., Active – Dues paid for 1959, moved to Bronx, New York 1957-59 VA hospital, June 28, 1959 VA hospital, Albuquerque, New Mexico, full-time VA employee in each instance. No resignation or transfer requested to date. Drop from membership December 31, 1959.

Wayne E. Truax, M.D., Associate – Dues exempt, moved to Houston, Texas in 1952 for postgraduate training, military service in 1954, University of Texas, Galveston in 1958, Society advises unable to make contact, justified in dropping from membership. Drop from membership now.

Pinal County Medical Society

Louis R. Fletcher, M.D., Active – Dues paid for 1959, moved to Fairbanks, Alaska in 1955. No resignation or transfer requested to date. Drop from membership December 31, 1959.

Yuma County Medical Society

Jerome E. Andes, M.D., Active – Dues paid for 1959, located in Needles, California since 1938. Possibly Yuma Society most convenient; however, Society does not clarify. By-Laws provide for such intra-state association; however, no provision for inter-state. No resignation or transfer requested to date. Drop from membership December 31, 1959.

While the Board expressed concern regarding this development, it was pointed out that the By-Laws Committee in drafting the revisions had these situations in mind and wished to dispose of the continuing problem. It was its opinion (the Board) that it had no recourse but to follow the present By-Laws currently in effect. It approved those regular membership classifications listed as recommended by the respective Societies.

It was moved, seconded and unanimously carried that an Articles of Incorporation and By-Laws Committee be reactivated and directed to study the problem and submit any recommendations indicated.

It was moved, seconded and carried 10 votes to one, Doctor Hileman voting in the negative, that the Executive Secretary take appropriate action in accordance with the By-Laws as these problems come up.

COMMUNICATIONS

University of Arizona

Doctor Richard A. Harvill, President of the University of Arizona, by letter dated July 3, 1959, expresses appreciation of action of House of Delegates of this Association, May 2, 1959, commending its College of Pharmacy for its founding and operation of a Poison Control Center. Received and filed.

Board of Medical Examiners

Honorable Paul J. Fannin, Governor of the State of Arizona, by letter dated July 17, 1959, advises of his appointments of W. R. Manning, M. D. (Tucson), Carlos C. Craig, M.D. (Phoenix) and Roy O. Young, M.D. (Flagstaff) as members of the Board of Medical Examiners of the State of Arizona for terms commencing July 20, 1959 and expiring July 1, 1962. Received and filed.

Arizona State Department of Health

Clarence G. Salsbury, M.D., Commissioner, Arizona State Department of Health, by letter dated July 30, 1959, in behalf of the State Board of Health, expresses pleasure in the appointment of a subcommittee on Public Health of the Professional Liaison Committee to work as a

liaison body between the Association and the Health Department giving great promise for the future. Received and filed.

Woman's Auxiliary

Mrs. Hiram Cochran, President of the Women's Auxiliary to the Arizona Medical Association, by letter dated July 20, 1959, expresses appreciation of the appointment of a subcommittee on Woman's Auxiliary of the Professional Liaison Committee; also, for the action of this Board in regard to extension of the Scholarship Loan Fund. In this latter instance, a committee will be appointed among its membership to survey the possibilities and report its findings to the Board with recommendations for approval. Received and filed.

AMA Indigent Medical Care

The Council on Medical Service of the American Medical Association, by letter dated July 10, 1959, set forth the policy on indigent medical care established by its House of Delegates recommending implementation of its recommendations at the state and county levels. Received and filed.

Socialized Medicine

Doctor Hamer by memorandum reported on action taken by the House of Delegates of AMA in annual meeting held in Atlantic City in June last referable to the resolution of this Association's House of Delegates adopted May 2, 1959 relating to Socialized Medicine. The national body adopted the following resolution:

> "WHEREAS, The American Medical Association has been in the past and continues to be completely opposed to all forms of socialism and socialized medicine; therefore be it
>
> "RESOLVED, That every government program which has implications of or might lead to socialized medicine should be scrutinized with great care before the profession enters into any such program."

Received and filed.

Joint Accreditation of Hospitals

Doctor Hamer by memorandum reported on action taken by the House of Delegates of the AMA in annual meeting held in Atlantic City in June last referable to the resolution of this Association's House of Delegates adopted May 2, 1959 relating to Joint Accreditation of Hospitals.

The Reference Committee on Medical Education and Hospitals of the AMA reported that it agrees with the statement contained in Resolution No. 7 that the program of accreditation of the Joint Commission on Accreditation of Hospitals has made excellent progress but calls attention to the "Report of the Committee to Review the Functions of the Joint Commission on Accreditation of Hospitals" (Wendell C. Stover, chairman – see JAMA 9-29-56 P. 490-500) which was adopted by the House of Delegates in June, 1956. The reference committee urged further implementation of the recommendations contained in that report and that the representatives of the American Medical Association who serve as commissioners of the Joint Commission be urged to expedite the implementation of this report. The reference committee believes that the House of Dlegates, in adopting the Committee report referred to above, has already acted with reference to the problem set forth in Resolution No. 7. It therefore recommends that Resolution No. 7 not be approved.

The House determined that no action be taken (on Resolution No. 7 at this time). Received and filed.

The American College of Surgeons by letter dated June 16, 1959 advises its Board of Regents considered the resolution adopted by this Association May 2, 1959 and authorized a study of the attitudes and policies of the Joint Commission assuring this Association of the College's concern in this matter. Received and filed.

National Society for Medical Research

The National Society for Medical Research (Chicago) by letter dated July 23, 1959, reviewed the activities of its group through the years and appealed for a grant to continue its 1959 program. Doctor Smith commended its activities.

It was moved, seconded and unanimously carried that a grant of $100.00 as a contribution to the National Society for Medical Research be authorized.

United States Pharmacopeial Convention

The United States Pharmacopeial Convention, Inc. in its "call" for a convention to be held in Washington, D. C., March 29 and 30, 1960, at Hotel Statler-Hilton, invited this Association to send one delegate thereto.

It was moved, seconded and unanimously carried that Doctor Richard L. Dexter, Tucson, be recommended for nomination to represent the

Association as its delegate to this convention.

Payson Clinic

David B. Gilbert, M.D., of Payson, by letter dated September 28, 1959, seeks the aid of this Association "in establishing the fact that the issuance of a license to an out-of-state man by the Board of Medical Examiners will serve only to jeopardize the economy of the Association's own member who has been faithfully serving the isolated community for two years and who intends to do so for the remainder of his life."

With consent of Doctors Manning and Young, members of the Board of Medical Examiners, the Executive Secretary briefly reviewed the problem at Payson Clinic and reported that the Board had already issued a temporary permit to a qualified doctor of medicine to practice in Payson on establishment of a community emergency supported by the Gila County Medical Society.

It was moved, seconded and unanimously carried that the matter be referred to the Grievance Committee for investigation and report back to the Board of Directors.

LOREL A. STAPLEY, M.D.
Secretary

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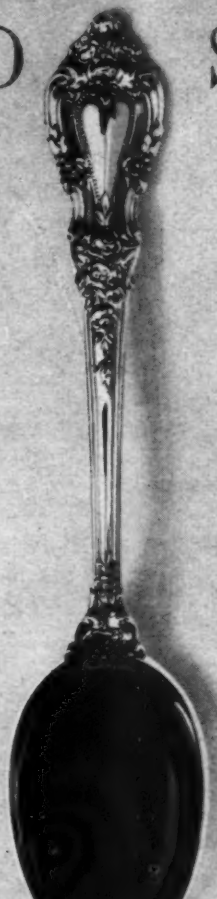

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Supplied: Each teaspoonful (5 cc.) contains 250 mg. of sulfamethoxypyridazine activity. Bottles of 4 and 16 fl. oz.

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ANNUAL MEETING QUESTIONNAIRE

PLANS for the 1960 Annual Meeting of the Association are taking definite shape, and monthly from now until May *Arizona Medicine* will report on various aspects of those plans. This first notice in the series discusses results of the questionnaire mailed to the membership, from which replies the general format of the convention has been designed. Almost 400 members answered, an excellent and encouraging response, and one which gives the Scientific Assembly Committee an unmistakable mandate in arranging the program.

The vote on the site was over two to one in favor of a resort type of hotel. The Phoenix area has been designated by the House of Delegates, and the Board of Directors has selected the Safari in Scottsdale, May 4th through May 7th. The choice was based on the considerations of ample facilities, refrigerative cooling, a separate area for our accommodation, and reasonable prices. For the minority that favored a big city hotel, the Scottsdale location will provide the ease of access and the commercial facilities that determined that choice.

The members balloted overwhelmingly for more stress on the scientific program and strongly for less emphasis on social and athletic activities. At the same time, the vote approved shorter sessions and shorter talks. In an effort to meet these preferences, the schedule provides for scientific meetings occupying the full mornings, starting at 8:00 o'clock with breakfast seminars on Thursday and Friday, and at 9:00 A.M. on Saturday in acknowledgment of the dinner dance the night before. All business assemblies are set for the afternoons so that they cannot encroach on the time set aside for papers. Thursday and Friday noons are allocated for specialty society luncheons, and Thursday night for specialty society banquets. Speakers will be provided at these affairs, which will be open to all registrants and will thus add extra hours of professional education.

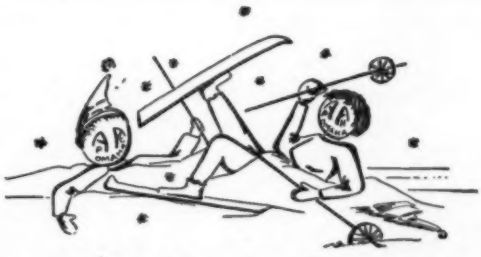
Next month the scientific program will be detailed in these pages, a program tailored to the specifications of the members as judged by answers to the questionnaire. Subsequent issues will bring short introductions to our guest speakers, their biographies and their topics. To stimulate the reader's appetite we mention only two features of this year's convention.

The exhibits will be housed in an air-conditioned circus tent, as a giant medicine show.

In an effort to restore participation in the meeting to members of the Association, discussants will be assigned to each of the guest talks, while an annual award has been instituted for the best paper by an Arizona physician. The presentation of this paper will be a feature of the Saturday session. The conditions of the award have been announced, and papers are now being received.

Get in your entry. You may achieve immortality!

L.E.B.



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BIOGRAPHICAL RECORDS

ARIZONA MEDICINE desires the following biographical material on all of the members of The Arizona Medical Association.

Many of you have filled out these questionnaires in the past. However, with the change of publication of the Journal, many of the biographies were lost, and obviously many pictures are outdated.

We would request that you please fill out the following form and return it to the editor's office, along with a picture if possible.

Thank you for your cooperation.

ARIZONA MEDICINE
720 North Country Club Road
Tucson, Arizona

"ARIZONA MEDICINE" BIOGRAPHICAL FILE

Date.....

Name in full ..... M.D.
(first) (middle) (last)

Professional mailing address .....
(street) (city) (state)

Residence .....
(street) (city) (state)

Place of birth ..... Date of birth ..... Sex .....

When did you move to Arizona? .....

In general practice ☐ Chosen Specialty .....
(name)

In private practice ☐ (seeing patients) Retired ☐ Not in private practice ☐

If not in private practice, indicate major activity:.....

.....

Schools attended. Mention places, years and degrees, if any: .....

.....

.....

.....

Medical School and date of M.D. degree: .....

Internship: .....

.....

Residence: .....

.....

.....

Specialty Board certification: .....

Teaching Appointments: .....

.....

Your professional career. Please include dates and places. .....

.....

.....

.....

Medical, church, club or fraternal affiliations. Include dates of offices held. .....
.....
.....
.....

Public offices held and important civic, political, charitable or other committees on which you have served. Please include dates. .....
.....
.....

Please list any scientific or artistic accomplishments such as inventions, discoveries, writings, musical compositions, paintings, research, etc. .....
.....
.....

If ever in military service, give dates, branch of service, unit, decorations, etc. .....
.....

Interesting hobbies or special activities: .....

Names of parents and their address: (Please give names even if deceased)

Father .....

Mother .....

Father's vocation .....

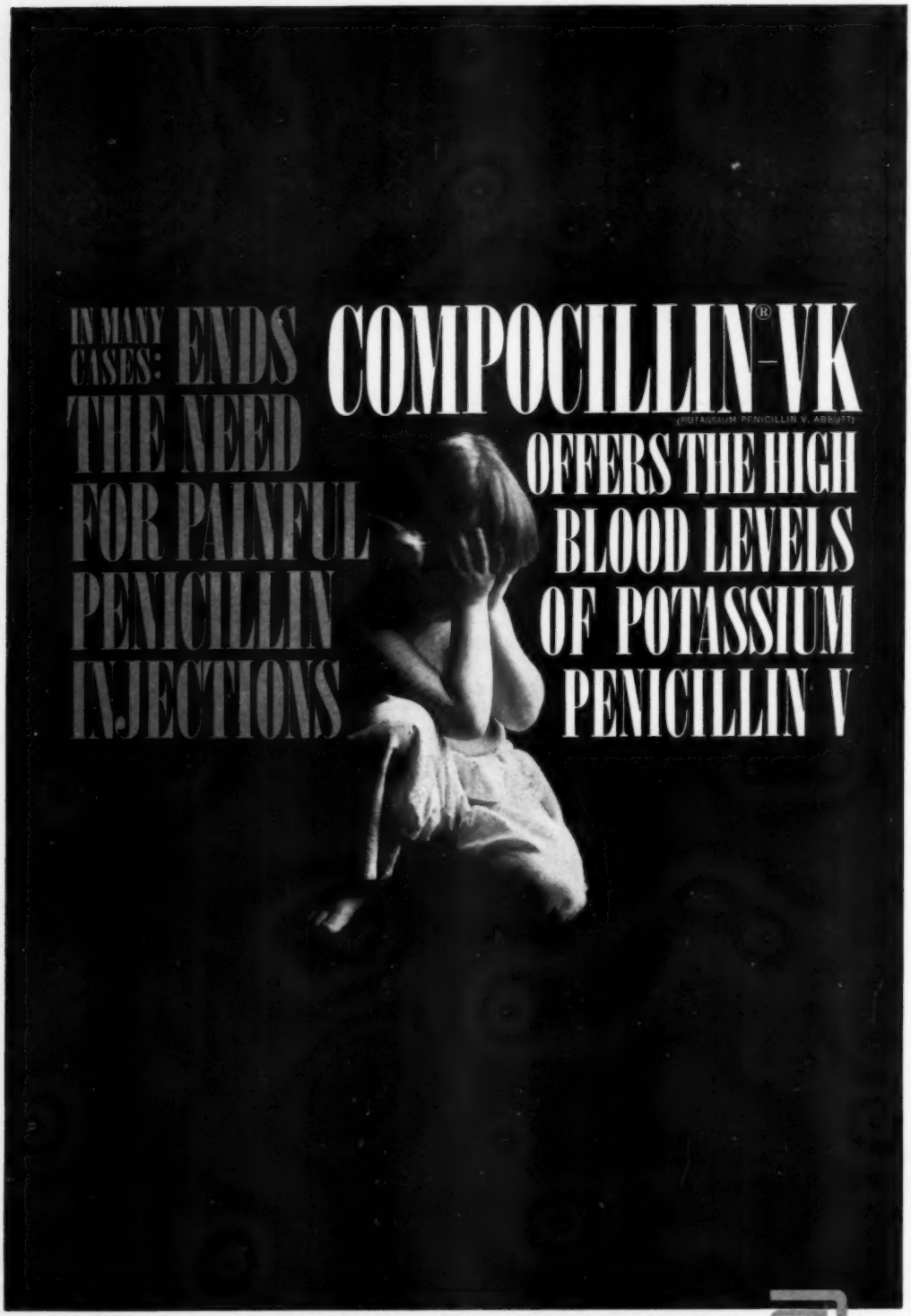
Brothers and sisters and their addresses: (Please furnish sisters' given names and their husbands' names) .....
.....
.....
.....

Your marriage, to whom, when and where: .....
.....

Your children, their birth dates and addresses: .....
.....
.....

Signature .....M.D.

PHOTO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THE SIXTEENTH ANNUAL CONFERENCE

of STATE PRESIDENTS, PRESIDENTS-ELECT
NATIONAL OFFICERS AND CHAIRMEN
Women's Auxiliary to the American Medical Association
October 5-7, 1959 Drake Hotel, Chicago, Illinois

THEME: OPPORTUNITIES FOR SERVICE IN THE COMMUNITY.

THE YEAR ahead will offer many challenges to the Medical Auxiliary member. If we are to fulfill our objectives we must all assume more responsibilities than we have ever done before. Because of the increasing costs of medical education, our support of A.M.E.F. is more important than ever. Our opposition to the Forand Bill encompasses a positive program for the aging. Civil Defense has called upon the doctor's wife to pilot a program which could save our country if war comes. Our program is demanding of your time; but if we are to pass to our children the heritage of freedom that we have enjoyed, we must find the time to meet it.

This was the "feeling" of the Conference that I came away with. I hope that I can impart some of it to you.

LEGISLATION

Mr. C. Joseph Stetler, Director Law Division, A.M.A., urged members to make personal call on senators, during recess, regarding the Forand Bill.

MEMBERSHIP

A panel type discussion was presented, offering suggestions for increasing membership.

BULLETIN

Of 80,000 members of the Medical Auxiliary, 10,000 subscribe to the Bulletin.

A.M.E.F.

Dr. John F. Sheehan – Dean, Strich School of Medicine, Loyola University – speaker.

Some of the highlights of Dr. Sheehan's Speech:

1. Tuition fees for medical school have increased 114% since 1949.
2. The budget for all medical schools last year was $116,000,000.
3. The federal government is now furnishing one-half the money used for research.
4. AMA gave $1,000,000 to medical schools last year.
5. Women's Auxiliary gave $140,500 to A.M.E.F.
6. Our goal next year is $175,000.

PROCEDURES

1. By Laws – Lincoln once said, "Important principals may and must be flexible." One of the problems discussed pertained to reciprocity of Auxiliary members between states.
2. Finance – At the present time, in the national savings, there is $111,000.00, which would be sufficient to operate the Auxiliary for two years, without income.

COMMUNITY SERVICE

AMA Program for the Aging.

Mr. George Cooley, secretary, Council on Medical Service, AMA, stated that the medical profession had assumed the leadership across the country to study the problems of the older citizen. He urged Auxiliary members to co-operate and participate in this program. The AMA office is anixous to receive all material pertinent to the facilities and care of the aged in every community across the country. He urged us to participate in the State Conference, in preparation for the White House Conference, in 1961.

MENTAL HEALTH

The Mental Health Program does not change appreciably from year to year. Priority projects for next year in this field are three:

1. Promotion of two educational series – "Milestones for Marriage," and "Pierre the Penguin."
2. Alcoholism education to meet a serious social problem.
3. Participation in the conference on aging.

SAFETY

Our safety goals remain the same this year – safety in the home, and on the highway. The AMA suggests we promote education for poison control.

PROGRAM

The program chairman is probably the most important committee member on the Auxiliary

Board. In the large community, the only real contact with most auxiliary members may be the actual meeting; and to a large extent, they will attend only if the program is inviting. In smaller communities, program material may be very limited. Plan programs to meet Auxiliary needs, and further health and education in the community.

PARAMEDICAL CAREERS RECRUITMENT

Loan vs scholarship seemed to be the problem of this particular committee. The trend seemed to be toward scholarships; however, it was generally agreed that loans are more desirable.

A new scholarship program is being offered by the National Foundation Health Scholarship Association (formerly polio). Health Scholarships are four-year college scholarships. They pay $500.00 a year, or a total of $2,000.00. Each is to help a student prepare for a career as a nurse, an occupational therapist, a medical social worker, or a doctor. (Arizona will receive five).

CIVIL DEFENSE

We have been asked to support a new civil defense program, geared to the women of our country. This plan was explained, and a kit containing the complete program was distributed to each Auxiliary member. These kits will be available through our State Civil Defense Director.

AMA ROUNDUP

Dr. Ernest B. Howard, Assistant Executive Vice President, AMA, gave a summary of the AMA activities for the year. Dr. Howard urged all Auxiliary members to work with their local Medical Society to defeat the Forand Bill. He pointed out that this bill will be approved or defeated by a "grass roots" movement. He urged support of the White House Conference for children and youth in 1960. He announced that "Today's Health" would no longer be sold by the Medical Auxiliary.

My own personal reaction to the three days of information is one of satisfaction. I believe we have fewer problems than most states, more participation, a greater percentage of members, make a fair share to A.M.E.F., work as closely with the Medical Society as Dr. Howard advises; and in view of our exploding population, seem to be ahead of the membership problem. However, let us not rest on our laurels.

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More and more people get blood every year:

Year	Number of hospital patients given blood
1952	1.6 million
1953	1.7 million
1954	1.8 million
1955	1.9 million
1956	2.0 million
1957	2.0 million
1958	2.2 million

(from New Medical Materia, Vol. 1, No. 10)

DOCTORS GAVE $4,154,450 *TO MEDICAL SCHOOLS IN* 1958

How the gift dollar was divided up:

Unrestricted Use	65.5c
Building Funds	20.6c
Endowmen Funds	3.6c
Scholarship and Student Aid	2.6c
Specific College Depts.	2.2c
Research	1.9c
Teaching Budgets	0.9c
All Other	2.7c

The average contribution amounted to $39.98.

(From New Medical Materia, Vol. 1, No. 10)

FOR SIMULTANEOUS IMMUNIZATION AGAINST 4 DISEASES:

Poliomyelitis-Diphtheria-Pertussis-Tetanus

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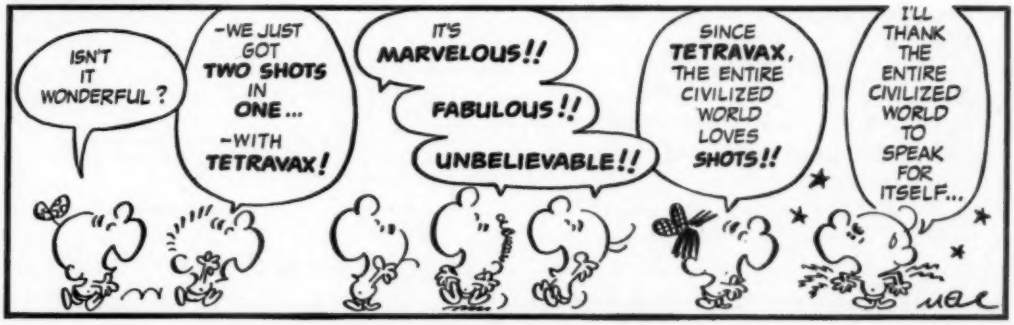
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- in allergic reactions of the upper respiratory tract

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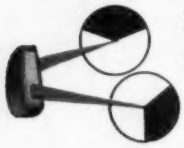

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then — the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:
Phenylpropanolamine HCl.....50 mg.
Pheniramine maleate.....25 mg.
Pyrilamine maleate.....25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides: ½ the formulation of the Triaminic Tablet.

Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides: ¼ the formulation of the Triaminic Tablet.

Dosage (to be administered every 3 or 4 hours): *Adults* — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.; *Children 1 to 6* — ½ tsp.; *Children under 1* — ¼ tsp.

1. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958.
2. Lhotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

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Topics of Current Medical Interest

ARIZONA POISONING CONTROL INFORMATION CENTER

Vesicating Caterpillars

A NUMBER of telephone inquiries were made at the Arizona Poisoning Control Information Center during the months of September and October seeking information as to the toxic potential of certain caterpillars found around homes in Arizona. In most cases, the inquiries came from the parents of children who handled the caterpillars and who complained of severe pain localized in the skin area which came in contact with the caterpillars.

The caterpillar that is apparently the most frequently involved is the Palo Verde Buck Moth *(Hemileuca tricolor)*. This caterpillar is commonly found on or near palo verde trees during the months of September and October. It bears numerous spiny, branched, fragile hairs containing a chemical substance which is a dermal vesicant. This highly irritating substance, the chemical nature of which is unknown, is contained in the hollow cavities of the hairs. When a caterpillar is touched or handled, these hairs are broken and the irritant is actually injected into the skin. Various degrees of skin irritation may be produced depending upon the amount of the irritant deposited. Signs and symptoms of the irritant effects on the skin may include reddening, itching, intense burning pain, and vesication. These effects are localized at the site of contact with the irritant. The recommended treatment consists of washing the affected skin area with soap and water and of applying a bland antiseptic ointment containing a local anesthetic in a petrolatum base.

A description of the Palo Verde Buck Moth is as follows:

Fully grown caterpillars are 1½ to 1¾ inches long and approximately ⅜ inches in diameter. They are pale greenish gray, and the outer surface resembles finely grained leather. The segmented body possesses 6 complete rows of dark spiny hairs which branch from a common axis. Two extra rows of these hairs are located on the first 5 and the last 2 segments. The hairs on the first segment behind the head are especially long, approximately 3/16 inches, and give a crown-like appearance. The head of the caterpillar is brown and does not possess hairs.

The Palo Verde Buck Moth disappears in late October. At that time they leave the palo verde trees and spin cocoons in sheltered places. The rather handsome moths emerge sometime between the months of January and March, but are perfectly harmless.

HYPOTHERMIA IN THE TREATMENT OF CARBON MONOXIDE POISONING

Deaths from various sources of carbon monoxide poisoning amount to several thousand annually in the United States. Poisoning in the home as the result of defective heating appliances or as the result of inadequate ventilation accounts for over 100 of these fatalities. Ten cases of carbon monoxide poisoning in Arizona were reported to the Arizona Poisoning Control Information Center during 1958-59. With the approach of the cold season, the incidence of carbon monoxide poisoning in the home is likely to be increased.

Typically, poisoning from carbon monoxide gas is treated by removal of the victim to fresh air or by the administration of oxygen. In severe cases of poisoning, the victim is treated with pure oxygen, and, if respiration has failed, artificial respiration is also instituted.

Recently, Craig and co-workers(2) reported the successful use of hypothermia in the treat-

*The poisoning cases included in this report for the month of September are in addition to those cases already reported for September in News Bulletin No. 10 (October, 1959).

ment of a case of severe carbon monoxide poisoning in an 18-year-old man. Several hours after admission to the hospital, the victim exhibited episodes of spontaneous decerebrate rigidity and failure to respond to painful stimuli. Since past experience indicated that survival is rare under such circumstances, the prognosis appeared hopeless. Hence, hypothermia was recommended because of the success reported by others with this therapy in other conditions associated with central nervous system hypoxia in humans and also in experimental animals subjected to carbon monoxide intoxication(3). Ice was packed around the patient over a thin plastic sheet and the body temperature was lowered to 32 degrees C (92 degrees F) within two hours. Chlorpromazine was administered to control shivering. Twelve hours after hypothermia was instituted the patient responded to painful stimuli and attempted to talk. After 32 hours of continuous refrigeration, he spoke normally and could move his extremities well. Cold treatment was then discontinued and the patient was gradually rewarmed during the next 8 to 12 hours. At the time of discharge from the hospital, two weeks after admission, the patient was normal in mentality and personality and exhibited no neurological deficit. A follow-up study eight months later showed him to be normal in every respect.

*STATISTICS OF 101 POISONING CASES IN ARIZONA DURING SEPTEMBER AND OCTOBER**

AGE:	77.2% involved under 5 year age group	(78)
	3.0% involved 6 to 15 year age group	(3)
	7.9% involved 16 to 30 year age group	(8)
	4.0% involved 31 to 45 year age group	(4)
	7.9% involved over 45 year age group	(8)
	0.0% were not reported	(0)
NATURE OF INCIDENT:	86.1% accidental	(87)
	13.9% intentional	(14)
TIME OF DAY:	34.6% occurred between 6 a.m. and noon	(35)
	37.6% occurred between noon and 6 p.m.	(38)
	17.8% occurred between 6 p.m. and midnight	(18)
	5.0% occurred between midnight and 6 a.m.	(5)
	5.0% were not reported	(5)
OUTCOME:	97.0% recovery	(98)
	1.0% fatal (aspirin poisoning)	(1)
	2.0% were not reported	(2)

CAUSATIVE AGENTS:

	Number	*Per Cent*
Internal Medicines		
Aspirin	33	32.5
Other Analgesics	2	2.0
Barbiturates	15	14.7
Antihistamines	2	2.0
Laxatives	4	4.0
Cough Medicine	1	1.0
Tranquilizers	0	0.0
Others	9	8.8
Subtotal	66	65.0
External Medicines		
Liniment	0	0.0
Antiseptics	4	4.0
Others	0	0.0
Subtotal	4	4.0

Household Preparations			
Soaps, Detergents, etc.		0	0.0
Disinfectants		1	1.0
Bleach		1	1.0
Lye, corrosives, drain cleaners		2	2.0
Furniture and floor polish		1	1.0
	Subtotal	5	5.0
Petroleum Distillates			
Kerosene		2	2.0
Gasoline		2	2.0
Others		2	2.0
	Subtotal	6	6.0
Cosmetics		5	5.0
Pesticides			
Insecticides		6	6.0
Rodenticides		0	0.0
Others		0	0.0
	Subtotal	6	6.0
Paints, Varnishes, Solvents, etc.		1	1.0
Plants		3	3.0
Miscellaneous		4	4.0
Unspecified		1	1.0
	TOTAL	101	100.0

POISONING CONTROL TREATMENT CENTER, WINSLOW, ARIZONA

A poisoning control treatment center for the community of Winslow, Arizona, and nearby areas is located at the Winslow Memorial Hospital in Winslow. The telephone number is 1580. The Winslow Poisoning Control Treatment Center became a part of the Arizona Poisoning Control Network in April, 1959. The name of this Center should be included in the list of Arizona Hospital Poisoning Control Treatment Centers presented in a recent A.P.C. News Bulletin(4).

Willis R. Brewer, Ph.D.
Dean, College of Pharmacy
The University of Arizona, Tucson

Albert L. Picchioni, Ph.D.
Pharmacologist and Director
Arizona Poisoning Control Program
The University of Arizona, Tucson

Lincoln Chin, Ph.D.
Pharmacologist
The University of Arizona, Tucson

1. Grateful acknowledgement is made to the Department of Entomology, College of Agriculture, The University of Arizona, Tucson, for information presented in this report on caterpillars.

2. Craig, T. V., Hunt, W., and Atkinson, R., "Hypothermia – Its Use in Severe Carbon Monoxide Poisoning," New. Eng., J. Med. 261:854 (October 22, 1959).

3. Giaja, J., Markovic-Giaja, L., and Sokic, P., "L'hypothermie experimentale et la toxicite de l'oxyde de la strychnine", 149: 447, 1955.

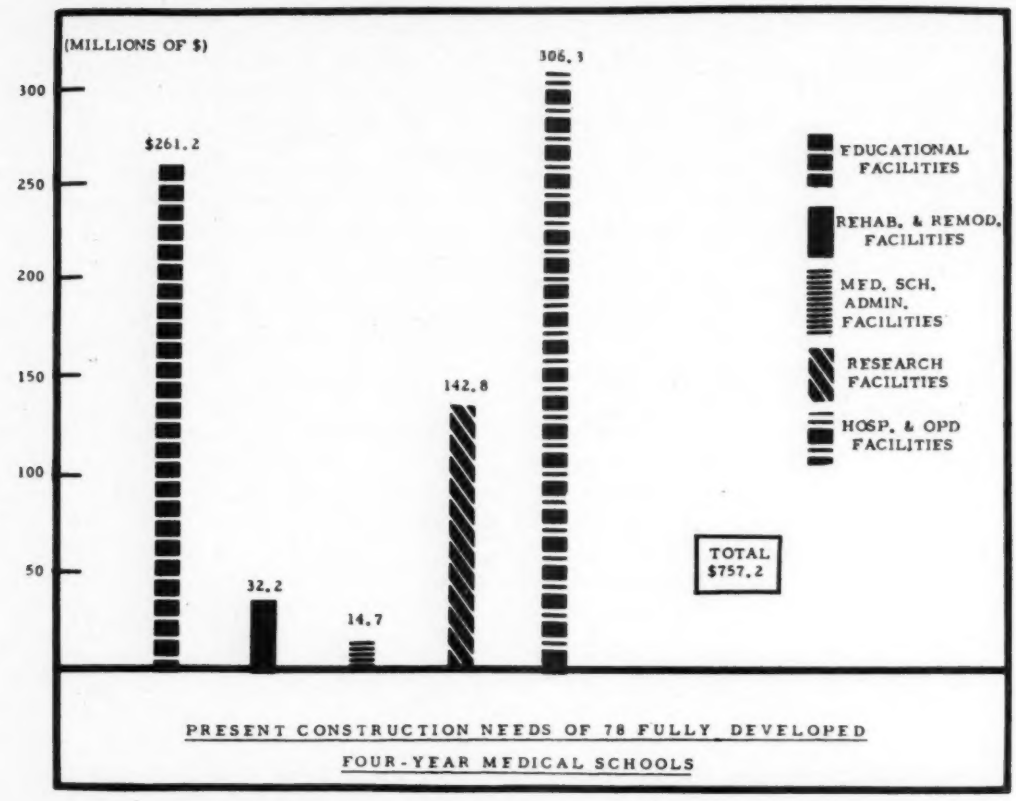
4. Arizona Poisoning Control Information Center News Bulletin No. 10, October, 1959.

ANTITRICHOMONAL ANTIBIOTIC

A new crystalline antibiotic, fervenulin, has been isolated from a species of soil actinomycete, *Streptomyces fervens*. De Boer *et al.*, of the Upjohn Company, reported that the antibiotic demonstrated antibacterial, antifungal, antiparasitic, and anti-tumor-cell activity in vitro. In-vivo studies in mice showed fervenulin to be effective against *Trichomonas vaginalis* and *T. foetus*, a 75 per cent cure rate being obtained with intraperitoneal administration. However, the in-vivo studies showed little activity against bacteria, fungi, and tumors.

(from Seventh Annual Antibiotic Symposium, Nov. 4-6, 1959, Washington, D. C.)

ASSOCIATION OF AMERICAN MEDICAL COLLEGES



Construction Needs

IN A RECENT AAMC survey, seventy-eight fully developed four-year United States medical schools indicated a need for $757,200,000 in construction funds between now and 1965 for the building of new teaching, research, hospital, outpatient, and administrative facilities, as well as for the remodeling and renovation of existing plants.

The above paragraph provides a breakdown of this estimated need for construction funds exclusive of student dormitories, recreational areas, and other facilities not directly related to teaching programs.

Student Detail Men

Forty students throughout 49 four-year United States medical schools were known to be working as pharmaceutical detail men during the school year, according to information received in the 1958 questionnaire of the Liaison Committee on Medical Education. Deans from 33 schools, responding to the same questionnaire, reported a knowledge of 45 students who were similarly employed during the summer vacation.

Student Externs In Hospitals Not Affiliated With Medical Schools

From the same questionnaire of the Liaison Committee on Medical Education, information was obtained on the number of medical students throughout 38 schools who were employed as externs in hospitals not affiliated with medical schools; 1.7 per cent of the Sophomore students; 8.5 per cent of the Junior students, and 14.2 per cent of the Senior students were so employed during the 1957-58 academic year.

Are Fewer Medical Students Working?

It appears that fewer medical students were

Submitted by the Division of Operational Studies of the AAMC, 2530 Ridge Ave., Evanston, Illinois. Source of information will be furnished on request.

employed during the academic year 1957-58 than in the two immediately preceding years. The dean's offices of 39 United States medical schools recently reported that 27.4 per cent of the students were employed during 1957-58. This compares with 35 per cent who were employed in 1956-57, as reported in "Ecology of the Medical Student." Approximately 49 per cent of the students were earning part of their medical school costs in the school year 1955-56, according to a sample survey of 44 schools conducted by the National Opinion Research Center.

Tuition Fees Going Up

Since 1939 the average annual tuition fee for medical schools in the United States has increased 114 per cent. Thirty-two per cent of the increase occurred between the years 1950 and 1956. During this same six-year period, the average family income increased 30 per cent, and the cost-of-living index increased by 16.9 per cent.

Early reports from a few medical schools indicate that some schools will raise tuition fees again this year.

The Board of Medical Examiners, State of Arizona

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WRITE FOR OUR ILLUSTRATED BOOKLET

they help the cough remove its cause

These elegant antitussives comprise a group of significantly superior expectorants from which you may select the formula best suited for your coughing patient.

First of all, they have more in common than mere delectability to eye and palate: they all include *glyceryl guaiacolate*. This remarkable expectorant aids the coughing mechanism by increasing the secretion of Respiratory Tract Fluid,[1] which helps liquefy sputum,[1,3] makes bronchial and tracheal cilia more efficient,[1,2] and acts as a demulcent.[1,3-5] Through its effects, all four expectorants promote the natural purpose of the cough, which is to remove the irritants that cause it.[1,2]

In addition, the Robins antitussive armamentarium provides a choice of widely accepted drugs in various combinations with glyceryl guaiacolate for treating different kinds of coughs and associated symptoms. For antihistaminic effects, there is Dimetane® or prophenpyridamine; for bronchodilation and nasal decongestion, there are sympathomimetic agents; and for suppression of the "too frequent" cough, there is codeine or dihydrocodeinone.

Robitussin®

Each teaspoonful contains:

Glyceryl guaiacolate	100 mg.

Robitussin® A-C

Each teaspoonful contains:

Glyceryl guaiacolate	100 mg.
Prophenpyridamine maleate	7.5 mg.
Codeine phosphate	10 mg.

(exempt narcotic)

Dimetane® Expectorant

Each teaspoonful contains:

Parabromdylamine maleate (DIMETANE)	2 mg.
Glyceryl guaiacolate	100 mg.
Phenylephrine HCl, USP	5 mg.
Phenylpropanolamine HCl, NNR	5 mg.

Dimetane® Expectorant-DC

Each teaspoonful contains the Dimetane Expectorant formula *plus* Dihydrocodeinone bitartrate, NF 1.8 mg.

(exempt narcotic)

References: 1. Cass, L. J., and Frederik, W. S.: Am. Pract. & Digest Treat. *2*:844, 1951. 2. Blanchard, K., and Ford, R. A.: Journal-Lancet *74*:443, 1954. 3. Hayes, E. W., and Jacobs, L. S.: Dis. Chest *30*:441, 1956. 4. Blanchard, K., and Ford, R. A.: Rocky Mountain M. J., Vol. 52, No. 3, 1955. 5. Boyd, E. M., and Pearson: Am. J. M. Sc. *211*:602, 1946.

Robins

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HIGHLIGHTS OF HEALTH MANPOWER REPORT WICHE

Here are highlights from the WICHE report on *Meeting the West's Health Manpower Needs* presented to the Western Governors' Conference September 25. The report was compiled from WICHE studies in the various health science fields. The forthcoming report on medicine alone, entitled *Medical Manpower Needs in the West,* can be obtained by writing the WICHE office in Boulder.

Growing Manpower Shortages

If we continue our present graduations from Western schools, by 1970 we will have produced only:

One-third the doctors needed – 600 of the 2300 needed

One-fourth the dentists needed – 400 of the 1700 needed

One-third the nurses needed – 2650 of the 6400 needed

Almost enough veterinarians – 150 of the 200 needed

One-fourth the dental hygienists needed – 80 of the 300 needed

In mental health, with present educational facilities, it will take . . . 29 years to fill the gap in psychiatry . . . 21 years to fill the gap in clinical psychology . . . 9 years to fill the gap in social work.

ADDITIONAL EDUCATIONAL FACILITIES NEEDED

If the West is to prevent acute shortages in these areas it needs:

In Medicine, more than 1,000 added places for entering students. In the immediate future, we need 500 added places, i.e., expansion of existing schools by 25 per cent plus three new schools.

For Dentistry, 1,260 added places for entering students. In the immediate future, we need to expand all existing schools and establish five new schools.

For Nursing, at least 2,000 more graduations annually at the diploma school or junior college level, 1,000 at the baccalaureate level, and 650 at the masters' level, plus more post-master's students. In the immediate future, we need to expand existing junior college programs to an average graduating class of 50, double existing baccalaureate programs, expand master's programs greatly, and create new programs at each of these levels.

For Veterinary Medicine, only modest enrollment increases in existing programs of undergraduate education for veterinarians. Graduate programs should be strengthened and expanded, however, to encourage more veterinarians toward teaching and research.

For Dental Hygiene, 500 added places for entering students, or the equivalent of 10 new schools. In the immediate future, we should open new schools and expand present facilities. Each Western dental school should provide for training dental hygienists. Other institutions such as liberal arts colleges and junior colleges should immediately consider establishing training programs for dental hygienists also.

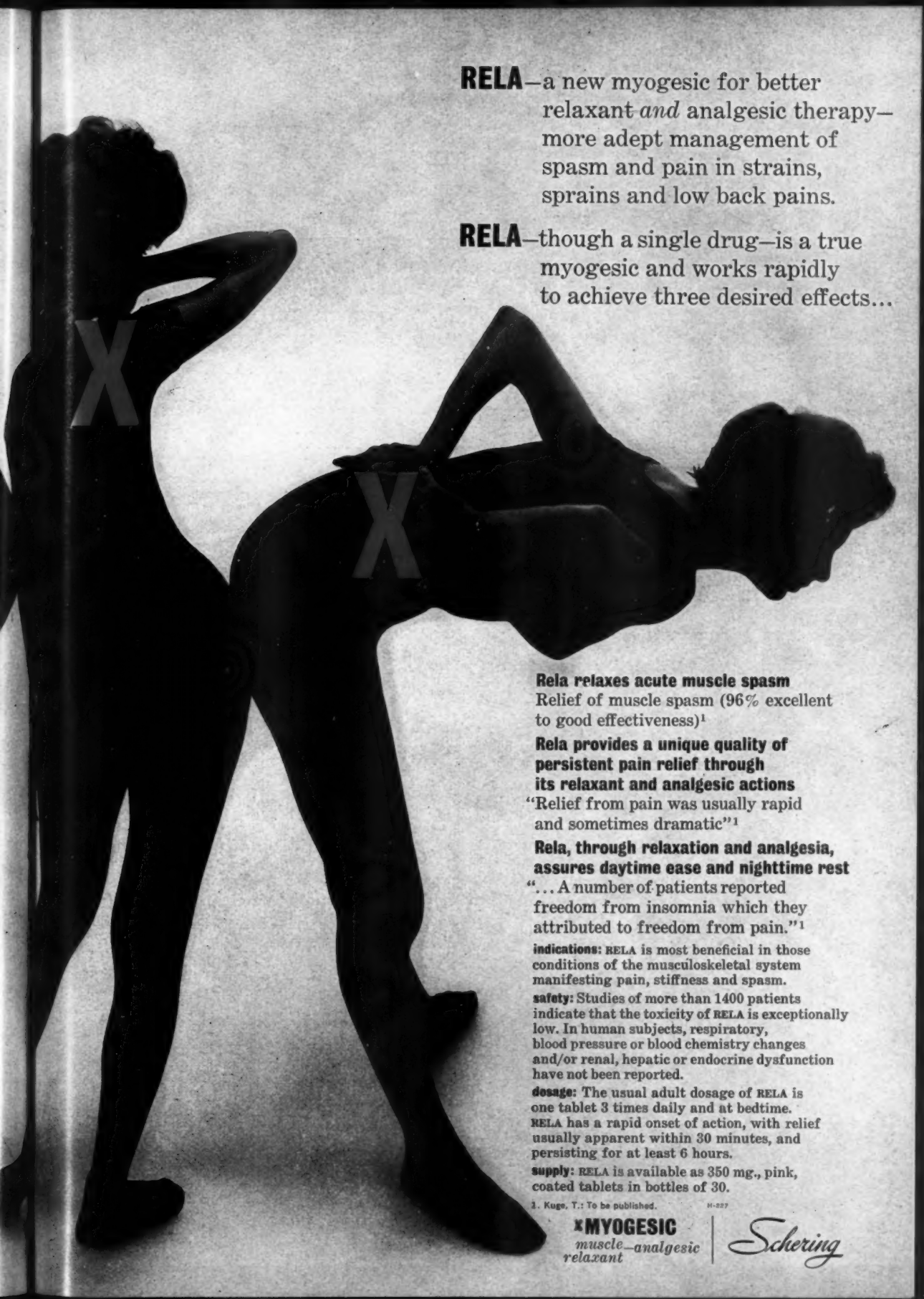
For Mental Health, attention both to the specialized programs such as psychiatry and to the basic health science programs upon which the mental health specialties depend. To expand the supply of psychiatrists, for example, medical schools must be expanded since the psychiatric specialty draws on them as a source. Recruitment and continuation education also are important.

For Public Health, expansion of basic health science programs, recruitment efforts, and continuation education programs are needed, as in mental health.

ANNOUNCING SCHERING'S NEW MYOGESIC[X]

RELA™ EASES STRAINS SPRAINS & LOW BACK PAINS...!

CARISOPRODOL



RELA—a new myogesic for better relaxant *and* analgesic therapy—more adept management of spasm and pain in strains, sprains and low back pains.

RELA—though a single drug—is a true myogesic and works rapidly to achieve three desired effects...

Rela relaxes acute muscle spasm
Relief of muscle spasm (96% excellent to good effectiveness)[1]

Rela provides a unique quality of persistent pain relief through its relaxant and analgesic actions
"Relief from pain was usually rapid and sometimes dramatic"[1]

Rela, through relaxation and analgesia, assures daytime ease and nighttime rest
"... A number of patients reported freedom from insomnia which they attributed to freedom from pain."[1]

indications: RELA is most beneficial in those conditions of the musculoskeletal system manifesting pain, stiffness and spasm.

safety: Studies of more than 1400 patients indicate that the toxicity of RELA is exceptionally low. In human subjects, respiratory, blood pressure or blood chemistry changes and/or renal, hepatic or endocrine dysfunction have not been reported.

dosage: The usual adult dosage of RELA is one tablet 3 times daily and at bedtime. RELA has a rapid onset of action, with relief usually apparent within 30 minutes, and persisting for at least 6 hours.

supply: RELA is available as 350 mg., pink, coated tablets in bottles of 30.

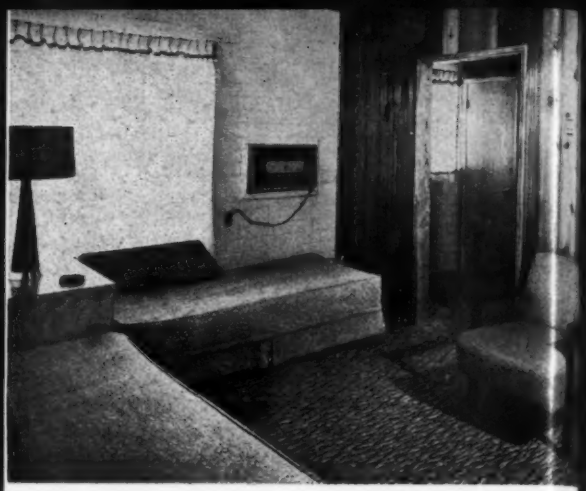
1. Kuge, T.: To be published.

H-227

RELA MYOGESIC
muscle relaxant—analgesic

Schering

CAMELBACK HOSPITAL FEATURES
GUEST RANCH ATMOSPHERE



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FOR RESTFUL LIVING

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VARIETY OF RECREATION FACILITIES

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. . . a psychiatric hospital treating acute nervous disorders and patients suffering from alcoholism or drug addiction.

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PHOENIX INSTITUTE OF NEUROLOGY AND PSYCHIATRY

PARAPLEGIC CARE AND REHABILITATION

The Western Neurosurgical Society held its annual meeting at La Jolla, California, September 28th, 29th, and 30th, and among many interesting presentations was a review of the current status of treatment of the spinal cord injured patient. This was given by Dr. A. Estin Comarr, urologist at the United States Veterans Administration Hospital, Long Beach, California. This treatment and rehabilitation center for paraplegics has established a unique record of results in handling this type of patient. The record is so envious as a matter of fact, that it would seem desirable to make this facility, or similar centers, available to all spinal cord injured patients after the acute phase of the injury has passed. Each of these patients develops problems of urinary tract infection, pressure sores, mass spinal reflexes or pain usually within the first year after injury. Specialized knowledge is required for achievement of the maximum success in solving these problems. Furthermore, the rehabilitation and training of a paraplegic, not only to take care of himself, but to perhaps return in time to a gainful occupation, takes many months and much specialized equipment.

As the situation exists now in the United States, in addition to Veterans Administration rehabilitation centers, there are a few private paraplegic centers which are excellent, but of necessity expensive. Only a few spinal cord injured patients of the many seen over the country each year can afford either private institutional care or the care of a private physician. Actually, the problems become so complex that only a rare physician would feel adequate to handle them all. Whenever a spinal cord injury occurs and the patient survives the acute phase, the questions are asked: "Is the patient a veteran?" "Does he have sufficient funds or insurance, industrial or private, to withstand long term professional and hospital care?" "Was someone else with funds or insurance responsible for the accident?"

If none of these criteria are met, and in the vast majority of cases they are not, a sad situation develops. Interest in the patient and his recurring problems wanes with the passage of time, and as mentioned previously, no one physician feels capable of handling all of these recurring problems. Thus many salvageable paraplegics are lost in the obscurity of someone's home, confined to bed with pressure sores, urinary tract infections, mass spinal reflexes, pain, and a hopeless outlook.

Canada has this problem under control in the Provinces of British Columbia and Ontario. Independent rehabilitation centers have been set up and are used by many agencies, including the Veterans Facilities, on a pay basis. Thus they have become self-supporting and financially dependent patients are not refused.

Insofar as the United States is concerned, the Veterans Administration already has rehabilitation centers with organization, interested personnel and excellent equipment. It would seem sensible and humane to make these facilities available to all paraplegics who desire and need them on a full pay basis if possible, but on partial or no pay basis if necessary.

Only with this concentration of paraplegic patients can well-trained, well-paid and interested professional personnel form the organization necessary to achieve the optimum results in the treatment and rehibilitation of a group of patients with a devastating disease.

Charles W. Elkins, M.D.
Tucson, Arizona

FREE CHOICE OF MD

Even the sometimes cold, impersonal hand of the Tax Court has recognized the fundamental importance of "free choice of physician" to good medical care.

Recently when the court ruled that a taxpayer was allowed to deduct the cost of his travel across the country to see his doctor as a legitimate medical expense, it declared the taxpayer "had confidence in his doctor, and we know of no rule of law that would require him to seek out another physician" nearer his home.

The Tax Court is to be commended for its insight into this important matter.

AMA News

AIR POLLUTION IN ARIZONA?

by Robert D. Smith, Jr. M.A.

Science Instructor: Scottsdale High School

WITH THE onset of the winter season many Arizona cities, and particularly Phoenix, will develop a layer of dirty air containing tons of foreign material. This layer of air will hover over central Arizona until the annual March winds cause a complete dispersal of the problem. This phenomenon will cause much discussion and agitation for corrective action. The reasons for the dramatic and abrupt occurrence of this nuisance is fairly well known. The factors involved follow definite meteorological principles much the same as certain disease syndromes progress in predictable patterns.

Air pollution, or smog as it is known in some areas of the country, is not a new problem. Many centuries of recorded history report numerous instances of severe episodes of air pollution, resulting not infrequently in disasters.

King Edward I and later, Queen Elizabeth, attempted to regulate the nuisance of air pollution by prohibiting the use and sale of sea coal during the months Parliament was in session.

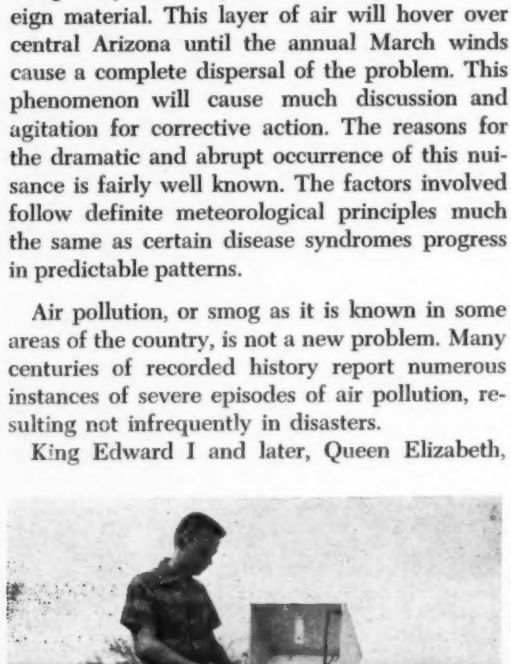


Fig. 1. A government air sampler located in northeast Phoenix. Here, the author is changing the porous glass filter. Air is drawn down through the louvered top and discharged out the bottom. (Photo by W. L. Groene)

The popular opinion that the extensive use of automobiles is mainly to blame for air pollution is not correct. However, this factor, together with the giant industrial movement and new residential developments, easily explains the origin of most foreign substances that enter the atmosphere at ever increasing rates.

The meteorological conditions for air pollution can be assumed to have always existed. The restricted air movement over a relatively small area such as the Los Angeles basin is perhaps the classic situation. All that is required was the addition of large volumes of foreign substances to the air.

In simple terms, air pollution results when substances or contaminants are added to the atmosphere faster than air movement by natural means is able to disperse the particulates. Since there is no practical means at the present time to remove large masses of contaminated air, the problem of air pollution control resolves into regulating the production of air borne foreign substances and the study of atmospheric conditions that "set up" or trigger air pollution.

The composition of our atmosphere is about 75 per cent nitrogen and 23 per cent oxygen, by weight, with the remainder being mostly carbon dioxide and rare gases. To be technical, all of these gases make up about 99.999 per cent of the total weight of the air near the surface of the earth. It is the minute 0.001 per cent that is the cause for alarm in many cities of the world.

Several governmental agencies are now actively engaged in major research projects to determine just what this 0.001 per cent of pollution

stemming from man's activities really is. Several cities have employed private consulting meteorologists for an accurate survey of their own city air pollution problems. Briefly, air pollution has now reached the stage of being recognized as an important problem of present day living.

The Public Health Service of the U. S. Department of Health, Education, and Welfare has inaugurated air sampling stations in some 17 communities to obtain very specific data on just what is in the atmosphere. In some three years after these first stations went into service, the number of participating communities grew to over 60 stations. Today, these stations are located in every major city, including Phoenix.

The Air Pollution Act was passed by Congress in 1955, giving the Public Health Service the responsibility of advising individual states and permitting it to do research on the problem. An air sampling network on a national scale was established in early 1957. The core of this new network was 117 sampling sites, 66 of which are located in large cities and 51 in non-urban sites. This was so designed to have at least one non-urban and one urban site operation in every state.

Samples are taken about once every two weeks at each operating station. At first, one would suppose that this is not enough sampling, but several tests have shown that this is a statistically sound way to collect samples. Even with these limited operating schedules, about 4,500 samples obtained per year.

The machine or apparatus used to sample the air operates much like the common household vacuum cleaner. It is located in a special shelter at a standardized height of less than 50 feet. In a given 24 hour period, about 70,000 cubic feet of air is passed through a pure and inert glass fibered filter. Almost all solid and liquified particles larger than 0.3 microns (one micron is about 1/25,000 of an inch) are trapped by this filter as the air is drawn through it. The reader may wonder why the sampling apparatus is located below a 50 foot maximum height. The reason is quite clear: it is in this lower 50 foot height that the majority of man's activities occur and it is also the area of maximum air contamination.

Upon the termination of a pre-arranged 24 hour period of operation, the sample is removed from the apparatus and forwarded to an area laboratory. At the laboratory, the sample is very accurately weighed to determine the gross pollution load or pickup. After weighing, it is then cut into sections, each piece subjected to a different and specialized analysis of the load.

The list of substances collected by the filter is most impressive as each city or community contributes a special type of load.

Each of the items found by analysis plays a significant part in the whole air pollution picture. Some of the organic pollutants can and do cause irritation of animal tissue and under conditions are believed to be a causative factor for cancer. Many of the sulfates and nitrates produced by the various industries cause corrosion and deterioration of durable property and equipment.

Solid precipitates are more readily identified and investigated. The study and influence of deleterious gases is much more involved and difficult. At the present time the pollutant gases are not generally measured as there is no low cost method suitable for use in a large scale sampling program.

The results of widespread air sampling indicate that each city appears to have its own peculiar variety of air pollution unlike that of any other city. Thus each city has its own "fingerprint" of pollution by which to identify itself. It is also a generally accepted fact that there is a certain minimal amount of suspended matter in the atmosphere at all times. This certain amount is caused by nature (dust storms, volcanic ash, etc.) and not by man. Finally, the amount of air pollution is directly related to population density and the amount of industrial development.

Future articles will discuss the meteorological, economic and legislative aspects of the problem.

CANCER CURRENT LITERATURE INDEX

A comprehensive up-to-date guide to the world's medical literature in the field of cancer — approximately 4500 bibliographical references a year. Published for the American Cancer Society, Inc. by the Excerpta Medica Foundation, New York Academy of Medicine Building, 2 East 103 Street, New York 29, N. Y. $7.50 a year.

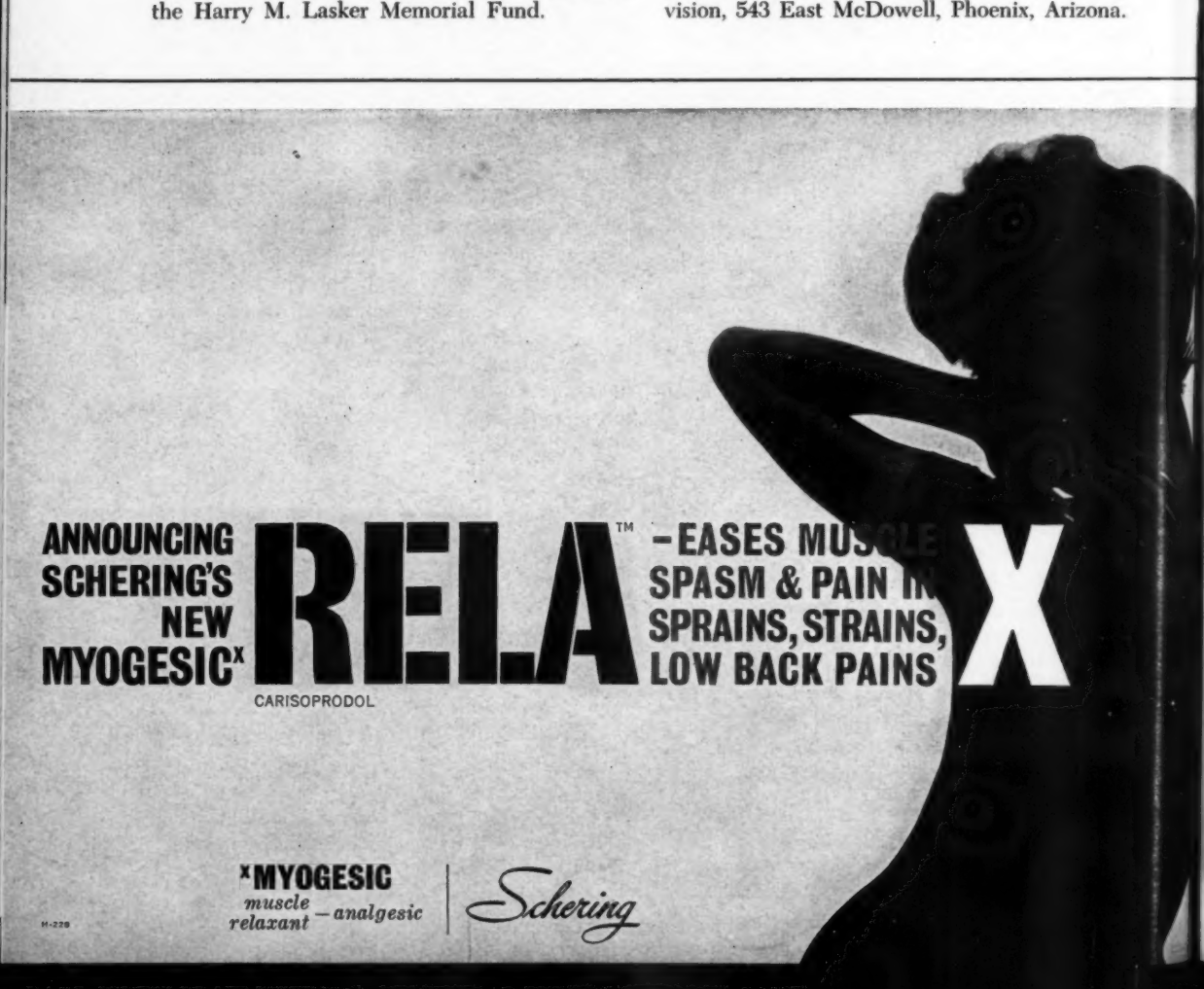
ARIZONA DIVISION OF AMERICAN CANCER SOCIETY

. ACS DISTRIBUTES SETS OF PHOTOMICROGRAPHS ON EXFOLIATIVE CYTOLOGY OF THE FEMALE GENITAL TRACT

A NUMBER of sets of 100 photomicrographs on exfoliative cytology of the female genital tract, each with a syllabus, are now being distributed to cancer coordinators in medical schools and to Divisions. The material was prepared by Dr. Leopold Koss, Director of Cytology at Sloan-Kettering Institute for Cancer Research, assisted by Grace R. Durfee, Chief Cytotechnologist, and was made possible by a grant from the Harry M. Lasker Memorial Fund.

The set is designed to serve as a teaching aid. The photographs were taken from the files of the Cytology Laboratory, at Memorial Center (New York), and represent actual cases seen and diagnosed in the laboratory. The syllabus contains legends for the interpretation of the photomicrographs, and also includes discussions of the various methods of early diagnosis of genital cancer in the female, technical principles and procedures of exfoliative cytology, methods of reporting material and of doing confirmatory biopsies and investigative procedures following cytologic study of smears.

These are available through the Arizona Division, 543 East McDowell, Phoenix, Arizona.



Reprints

EXAMPLES OF THE INSPIRING CHALLENGE TO MEDICINE IN LITERATURE THROUGH THE AGES

James Barrett Brown, M. D.
St. Louis, Missouri

WE IN medicine have a heritage coming down to us through the ages, from the widespread interest in writing about, and talking about, medicine and its problems. This can be taken as an inspiring challenge in our work. We know that there can never be perfection, and many feel about our patients as Marcus Aurelius did about his people, in that he could not give them what they deserved, or what he would like them to have. But he gave his life in trying, and left us part of our heritage from nonmedical sources.

For these reasons, it seemed worth while to look further into our situation, from the standpoint of what others may think of us, and write about us, in the pursuit of the ever-popular, and ever-present, subject of medicine and *the health of the individual.* Health problems, along with truth, as Socrates said, belong to everyone; and it is the public's right, and the right of literature, to present these problems for discussion — sometimes for condemnation, but more frequently for praise of our profession. Such public and literary discussions may serve us as sources in finding what we might mean to the public, and what we might be able to do, if we would concentrate on precepts that we were inspired with in our decision to follow this profession, and to which we hope to remain dedicated.

John Buchan, the author, who became Lord Tweedsmuir, Governor General of Canada, in his writing, contributes compliment and encouragement to the *individual,* and he has acute ability to suggest forthright endeavor in one's life. He has summed this up in one sentence: "You do not set up a mark to miss it." This is certainly an acceptable precept for surgery.

The trend of the general public and of literature is to hope, and suggest, that the man in medicine does as nearly perfect as is possible. To repeat, I believe this can be taken as a heritage and as an inspiring challenge.

It is true that there are deviations from this theme and much antipathy to medicine and to doctors, but all of literature does not contain any more of these elements than appear in our own discussions, in our efforts to see that the best precepts are carried out by all concerned. We may learn, from each of these authors, items of help for us in our way of life. George Bernard Shaw, in "The Doctor's Dilemma," showed us the long-winded doctor, who was so boring in his speech and action that every one at a party was lulled to sleep by his incessant talk, and finally he himself succumbed to his own eloquence and dropped off, sound asleep, in the middle of one of his own speeches. Moliere occupied himself, at length, in criticism of doctors.

Extreme interest in medicine runs throughout literature. For my part, having grown up a block from Mark Twain's home in Hannibal, it is natural to turn to Mark Twain. I was much saddened as a boy by the immense medical situation of poor young Dr. Robinson's having to open a grave, on the hill south of Hannibal, to extract the body of Hoss Williams so that he could better prepare himself for his task, and best serve his patients. He had hired Injun Joe and Muff Potter to go to the graveyard with him, and on this same night Huck Finn and Tom Sawyer happened to be there, for another medical reason, that of getting rid of warts. The boys, near the grave, looking for "spunk water," saw the eerie three approaching. After the body was out of the grave, Muff Potter, who was drunk as usual, held up Dr. Robinson for more pay and, as Muff had a knife in his hand, Dr. Robinson became frightened and hit him over the head with a grave board. During this scuffle, Muff dropped the knife and Injun Joe

From the Department of Surgery, Washington University Medical School.
President's address delivered at the 66th Annual Meeting of the Western Surgical Association, Rochester, Minn., Nov. 20, 1958.

grabbed it up and killed Dr. Robinson and then planted the knife on Muff Potter. Muff was exonerated only after a long, hard decision on part of the boys, who feared Injun Joe's retaliation; however, Tom finally came through in the court scene, in which Injun Joe crashed through the window and escaped. Injun Joe was later located, dead, in the cave after it had been locked up, following the rescue of Tom and Becky Thatcher from it. This incident in this book meant a great deal to me as a boy, and it still does, because it expresses sympathy for the medical profession. It occurs as one of the most dramatic episodes in what Ernest Hemingway has called the classic American novel.

Tom's Aunt Polly was addicted to patent medicines, cramming them down Tom on every occasion, and one especially attractive pain killer that she dosed him with almost burnt him up. Soon thereafter the cat came fooling around Tom and the pain killer. Tom told the cat not to ask for any of the pain killer if he didn't really want it, but that if he really *did* want it he could have some. He carefully poured a dose into the begging cat's mouth, and the ensuing scene was one of destruction of the room. When Aunt Polly returned, she wanted to know what had happened to the house and the cat, and Tom said he had given the cat some pain killer, "because he had asked for it," and "because the cat didn't have any aunt to give it to him." Here, again, we see the ever-present idea of health and medication, and of manipulation of the human being for relief of discomfort.

Still another medical situation in "Tom Sawyer" is that of the schoolmaster who had been thwarted in his great desire to study medicine. The secret book that he read interminably in school, to the great amazement and inquisitiveness of the students, turned out to be a florid copy of anatomy, as Tom and Becky found out when she, unfortunately, tore one of the pages.

"Huckleberry Finn" uses smallpox as an excuse to keep two men, in a skiff, away from the raft where Huck has Negro Jim hidden, by suggesting that his deathly sick father is on the raft and needs help. They themselves assumed that Huck's father had smallpox; so, rather than risk exposure, they each put a $20 gold piece on a log, floated it down to Huck, and then went on without offering to help.

In contrast, the doctor, when Tom is shot in the leg, cares for the boy throughout the night on the same raft. We remember, too, that Jim will not run off, although this is his chance for freedom, but stays to help the doctor with Tom. It is pleasing to see the doctor's position in the book again, when he proves his moral courage in his defense of the Negro Jim from the crowd that had gathered to do him harm. The doctor is beautifully illustrated by Kemble as being the ideal type of person one *would* go to for help. It is apparent that the author picked out the medical profession to exhibit kindness, fairness, work, and willingness to help a stricken person. The self-sacrifice involved in risks taken daily by medical men has not been more touchingly presented in American literature. It is sad that the schools of New York City have ruled out "Huckleberry Finn" from their libraries. No child shall be allowed to read it because the word "nigga" is in it, even though a Negro is the hero of the book. The perversions of literature still may be there, but "Huckleberry Finn" is ruled out. Many parents in New York probably will suggest that their children *do* read "Huckleberry Finn," so that this fair and honest and early evaluation of the situation may not be lost to them in their considerations.

"Life on the Mississippi" portrays the dramatic medical situation of Henry Clemens, Mark's brother, being burned to death in a steamboat explosion. The illustration showing Mark Twain in the hospital with his brother dying in front of him shows deep interest in the subject of burns. In the first edition of this book, on page 441, Mark Twain has his *own* image in the center of a group of flames. These flames are supposed to be the ultimate for Mark Twain, as they are hell-fire itself. A further interesting point is that in the second printing this illustration has been deleted, at the request of Mark Twain's wife, as she thought the illustration of the death of one member of the family from fire was enough.

Shakespeare is full of blood and thunder, but he also shows that the mental and bodily health of persons is of deep concern to him. The passage of Portia advising Shylock to "have by some surgeon, Shylock, on your charge, To stop his wounds, lest he do bleed to death," is perhaps the best known, and has the direct suggestion that a surgeon *would* be of benefit. It would have been good medicine to have had a Portia

to help out with the phychiatric problems in "Hamlet."

The prevention of heart attack is described in "The Tempest," and has been beautifully illustrated in the Charles Lamb edition. Miranda thinks her dear lover, Ferdinand, is overtaxing his heart in carrying wood for the fire, and she offers to carry it, saying, "Alas, do not work so hard; pray rest yourself." Whereas there is comedy in this situation, there is still interest in medicine, besides which Miranda is giving good medical advice.

Since these medical elements have such intense interests, we might learn to use it to develop our public relations. In any event, we can accept these challenges that come to us as a heritage and can try to profit by them in our life's work.

Injuries of wars, of frontiers, of industry and traffic, and of the home, are with the populace throughout their lives. If we change mass into energy if we have shooting wars, some one is going to get hurt, and some group needs to be there to help. For the frontier, we can go to the works of Alfred Henry Lewis, of early Arizona; these are illustrated by Frederick Remington, the first of which is on the cover of "Wolfville," wherein Texas Thompson is dispatching two or the undesirables with a gun in each hand. Depicted a little less dramatically, but forcefully, "a helpless short-horn stops both heels of a jackass in his mid-section." In these stories of "Wolfville," a leading citizen is Doc Petes; he is said to be the best-educated man in Arizona. He is looked up to for all sorts of good deeds, public effort, his surgery, his medicine, and for attending the birth of one baby in "Wolfville." A good example of a very brief operative report is that of the amputation of a horse thief's shattered leg, at the end of the story – "and humming a roundelay, Doc Petes cut merrily into the wounded member." In these tales of the old Southwest, medicine and surgery, in concept and in appreciation, are at the top of endeavor.

Items of medical interest occur back in antiquity, and from them may be learned important traits of character and of development, which still can be applied. For example, Democritus, about 400 B. C., was the first to use the word "atom" and used in its correct meaning of the time as something that could not be divided, or "without cutting." This laid the foundation for the concept of the elements, although its acceptance was delayed for about 2,000 years by Aristotle and his devoted followers, who stuck to his four elements only, of Earth, Air, Fire, and Water. Many must have questioned the work of Aristotle, but his influence could not be broken until the time of Galileo, Leeuwenhoek, Newton, and Gassendi, with their simple basis of theory and experiment. This situation has direct relation at present to all study and research, in that excessive pedantry, and inability to go forward or to avoid slotted information that can never be changed, may be taken as warnings to concepts in medicine. There need to be some persons who are allowed the most complete freedom to think, to foresee, and to experiment, in order to make advancements. A tremendous influence in one field may militate against acceptance of teamwork and of help from other fields that apply to the same problems. We in surgery, where the moment of actual work becomes so technical and personal, well realize that we must utilize the investigative work of others to give the most benefit to the individual patient.

As surgeons, we need to search for helpful adjuncts as much as anyone in medicine, because what happens to our patients is what we have done for them ourselves, not something delivered from a drugstore, or fought out along familial lines, or against some mental aberration. We are responsible as individuals for what we do for our patients, and we need the results of experimentation and the acceptance of help from other fields. Such help was often lacking during our own Civil War. At that time a surgeon, who was an authority on amputations, performed a large series in which the technique was perfect but, unfortunately, the patients all died of tetanus. Really good surgical results had to wait for bacteriology and immunology. I hope I may be excused for mentioning the results of cooperation of services in my own Army experience, in which there were no deaths in over 30,000 operations. The reason for this was that we used all the adjuncts and teamwork possible of anesthesia, medicine, radiology, laboratory, and other branches of medicine, working together to give the best to the patient. We know these facts from our own medical lore and literature, and we can find analogies in the general literature down through the ages.

In the Civil War literature by modern authors, again, we find acceptance of medical importance. A dramatic instance occurs in Shelby Foote's "Shiloh," where he describes the death of Gen. Albert Sidney Johnston. Dr. Yandell, his surgeon, argued against taking time to care for the fallen Northern soldier, but General Johnston cut him off with, "These men were our enemies a moment ago; they are our prisoners now. Take care of them." The sad thing about this is that General Johnston bled to death, just a little later, from a neglected wound from which he would have been saved if Dr. Yandell had not been caring for their prisoners. The needless loss of General Johnston was an extreme blow, and even more to Robert E. Lee was the loss of Stonewall Jackson, as recorded by Douglas Freeman. We remember that Jackson was shot, by mistake, by his own men. Dr. McGuire removed the arm, but the General died. This important medical situation has left us the beautiful final words of General Jackson: "Let us pass over the river and rest under the shade of the trees." When General Lee was told that General Jackson had lost his left arm, General Lee's comment was that, while Jackson had lost his left arm, he, Lee, had lost his right arm and he wished he could have been in General Jackson's place. These situations have nothing to do with sectionalism, but they point out, again, that we are the heritors of a tremendous feeling to hope for help from us on the part of the people of the world and of the authors that record their lives and their activities.

From ancient writings we may find instances of mistakes in interpretation and actual changes in concept of what the original authors intended. The popular idea concerning Epicurus' philosophy is a prime example of distortion of original intent. His philosophy is usually interpreted as being intent on pleasure. The truth is that his pleasure was to be solely the lack of pain, to have peace of mind, or "ataraxis," as it was known so early in the world's history. He lived simply and frugally, did not stuff himself with food, and laid down rules of conduct with elements that could be followed today, to the world's advantage. His ideas of propagation of the race are not in accord with ours, but one seldom finds a book or a treatise in which every idea is acceptable. Epicurus was so much the devotee of *not* having pain that it would seem that somewhere in the field of anesthesiology the name of Epicurus should be included. He was generally, and finally, against pain and taught that being without pain produced the most pleasure in life. Epicurus was not the Epicurean of popular idea.

Epicurus, also, was one of the first to back Democritus on his atomic theory. He could not go along with the idea of the exact sameness of all atoms, however; and even back in that day of antiquity he maintained that there was some deviation of atoms in their constant activity. It is of great interest that now, in our own day, in 1957, a Nobel prize has been given for the finding that certain mesons of the atom *do* show deviation of movement. These things need not make each of us to feel that we cannot count on accumulated knowledge; but they do indicate that we can continue to experiment and prove, and show concern for facts which are not finally determined for us, and to keep open minds for improvement in our knowledge of the elements of our profession. One might even conjecture that, with the transmutation of the elements, Aristotle might be proved right with his Earth, Air, Fire, and Water, after all.

Lucretius, in "On the Nature of Things," is the one who gives us the data of Epicurus. Presumably, Epicurus *had* produced his own work but it did not survive, other than in this long poem of Lucretius. It is so long, and there are so many quasi statements and such lack of scientific observation, which, incidentally, was impossible in their time, that one tends to reject such works. Still it is apparent that we can gain a philosophical outlook concerning medicine from many places in the literature of the ages.

The "old philosopher" Lao-tze, born in 604 B. C., in "The Way of Life," suggests many things of value to medical concepts. He taught for a large number of years, but did not put anything down, since, in the words of Bynner, he had "decided that a great deal was done and said in the world which might better be spared." He believed in what has been called "creative quietism." He thought that a man could be a doer without being an actor. He was aware of the dangers inherent in dogma. He laid down no rigid laws for behavior other than that he thought men's conduct should depend on their instinct and conscience. He was saddened by

men's tragic perversity and their indispotion to accept "The way of life." Lao-tze's philosophy of creative quietism, depending mainly on patience, forbearance, and fortitude, is so simple as to appear somewhat mystic, but nothing could have been farther from the thought of Lao-tze than to start a religion. The religion that followed this philosophy was a marked distortion of this simple precept; as Bynner says: "Men love to turn the simplest and most human of their species into complex and superhuman beings; thus everywhere men yearn to be mislead by magicians; thus cults in all lands under virtuous guise make of ethics a craft and a business."

As early as the sixth century B. C. Lao-tze said: "Can your learned head take leaven from the wisdom of your heart?" In this he suggests that the head *did* have the most to do with mind, and thought, as far as actions are concerned, and this was at a time when the seat of the mind was thought to be within the breast. Lato-tze did not know what cancer was, but a small part of his philosophy suggests the best that can be utilized, at present, for cancer. He stated: "Men knowing the way of life face the simple fact before it becomes involved." "Solve the small problem before it becomes big."—"The most involved fact in the world could have been faced when it was simple." "The biggest problem in the world could have been solved when it was small."

"A Doctor of the Old School," by Ian McClaren, contains dramatic praise of the medical profession. Alexander Woolcott has called this the finest descriptive and character writing in English. Among other things, it combines the value of cooperation between the general practitioner and the surgical specialist.

It concerns Dr. William Maclure, who practiced in Drumtochty, Scotland. A single horse could not do the work of this man, but he liked best his old white mare, called "Jess," who must have returned his liking, because she died a week after the doctor. He could ride faster and stay longer in the saddle than anyone in the parish, and it was all for mercy's sake. When Annie Mitchell was dying under his care, he called for help from Sir George, the Queen's surgeon, and had to drive him through the flooded Tochty River with great discomfort and danger. With the black waters racing all around the dogcart, Sir George's nerves were shaken, and he ordered Maclure to turn back, as he "would not allow himself to be drowned for any person." "Sit down," thundered Maclure, "Condemned ye will be sooner or later, if you shirk your duty, but through the water you are going today"; and Maclure prevailed. Annie Mitchell was saved by the surgical specialist out in this inaccessible mountain parish. Sir George would accept no pay, as he knew Dr. Maclure was going into his own pocket for the fee. As his returning train moved out, Sir George said: "Give us another shake of your hand, Maclure. I am proud to have met you; you are an honor to our profession. Look after Annie and mind the antiseptic dressings."

I shall ask the privilege of a personal insert here in relation to this very wonderful character in the old Scotland. My wife has a native Scot nephew who graduated at Edinburgh and who wanted to take care of families on the west coast of Scotland for the rest of his life, in some such manner as Dr. Maclure. Sadly and unfortunately, because of the National Medical Service, this young man was not allowed to inject this much personality and individuality into his work. He found that he could not stand the thought of this authoritarian life in his beloved country, and so he migrated to Western Canada for his life's work. I believe such instances are great losses to Scotland, and to the United Kingdom.

In such search as this for sources, one would naturally like to find some of the basic thought processes of the great names in scientific research. Although we may not know specifically of the work of those in other fields, we may try to understand *how* they think, and possibly find some application to our own problems. We, also, would find that it does take a real genius for great advancement, but we can learn from such persons how men of genius work. At the same time, it is found that a genius is a normal person except for the peculiar powers of reason which account for the great elements of progress.

Concerning research, Einstein has said: "Scientific research can reduce superstition by encouraging people to think and survey things in terms of cause and effect. Certain it is that a conviction, akin to religious feeling, of the rationality or intelligibility of the world lies behind all scientific work of a higher order." It is in-

teresting to see the genius of Einstein in his deep appreciation of others' contributions. For example, concerning Newton, he said: "It is just two hundred years ago that Newton closed his eyes. It behooves us at such a moment to remember this brilliant genius who determined the course of Western thought, research and practice, to the extent that nobody before or since his time can touch."

Considerations of mental and physical health are often found in unexpected places. I would like to repeat a short sentence of Longfellow's, which my mother had framed for me many years ago for my own room. Longfellow said, "If we could read the secret history of our enemies, we would find in each man's life sorrow and suffering enough to disarm all hostility." Here, again, is the theme of the human being suffering. It is uppermost in his mind through most of his life, and someone must be on hand to help.

As previously noted, all is not serious about the public's and literature's recognition of the medical profession. In "Tristram Shandy," written by Laurence Sterne, there are many medical situations, perhaps climaxed by Dr. Slop, in his curse that was nine pages long, directed at Obeideah, his servant. This was occasioned by Obeidah's having gone by horseback to get instruments for a delivery, but, having tied them so securely in the saddlebags, and having then galloped so furiously that the knot was pulled tight, Dr. Slop could not get it undone in time for the baby, and in the process cut his thumb "quite across to the very bone." None others have equalled this nine-page oath, although some may have been trying; but it is hoped that this will *not* be considered a challenge of literature.

Stephen Leacock, in "How to Be a Doctor," says:

What I want to speak about is the progress of medicine. There, if you like, is something wonderful. Just think of it, a hundred years ago there were no bacilli, no ptomaine poisoning, no diphtheria, no appendicitis. Rabies was but little known and only imperfectly developed.

Or consider the advance of science on its practical side. A hundred years ago it used to be supposed that a fever could be cured by the letting of blood; now we know positively it can not. Even seventy years ago it was thought that a fever was curable by the administration of sedative drugs; now we know that it isn't. For the matter of that, as recently as thirty years ago, doctors thought that they could heal a fever by means of low diet and the application of ice; now they are absolutely certain that they can not. This instance shows a steady progress made in the treatment of fever.

In only one respect has there been a decided lack of progress in the domain of medicine. That is in the time it takes to become a qualified practitioner. In the good old days a man was turned out thoroughly equipped after putting in two winter seasons at a college, and spending his summers in running logs for a sawmill. Now it takes anywhere from five to eight years to become a doctor. Of course, one is willing to grant that our young men are growing more stupid and lazier every year. This fact will be corroborated at once by any man over forty years of age, but even when this is so, it seems odd that a man should require eight years now to learn what he used to acquire in eight months.

Leacock has a few more quips about diet, biopsies, and analytical laboratory work, and refers to Apollinaris and Scotch several times; but he goes on to say:

And yet, isn't it funny you and I and the rest of us, even if we know all of this about doctors, as soon as we have a pain within, rush for a doctor as fast as a hack can take us.

In this typical Leacock fashion, we find a summary of what we are talking about — that the people do have aches and pains and catastrophies and sadness, and they seek relief somewhere. These needs, these yearnings are the heritage of the medical profession. If we can convince the public that we feel that their troubles are a challenge and real concern to us, perhaps many of our difficulties may be made easier.

Medical advancement is somewhat like the dawn around the world, always occurring, every minute of the day, with slow but steady progress. There are occasional cataclysmic discoveries from training in observation, or by serendipity, and always there is our need and desire to "observe and record for mankind." Perhaps this literary heritage, this widespread interest in medicine, observed in the literature of the ages, can show us the true value of faith and spirit in our work, and thus be an inspiring challenge to our profession.

"WARNING TO AMERICAN PHYSICIANS

"Personal Experience with Socialized Medicine by

Jacobus H. Verhave, M.D.

Portales, New Mexico

Practicing Physician in Amsterdam, Netherlands, 1925 to 1948

THERE are two systems of Socialized Medicine, which are essentially the same. Time is the only factor that distinguishes these. The systems are:

"1. *Immediately identifiable Socialized Medicine,* authorized by legislature, with establishment of public institutions and bringing into effect laws controlling the practice of Socialized Medicine. This occurred in Great Britain.

"2. *Disguised Socialized Medicine,* supported by legal regulations. Disguised Socialized Medicine is masked by a complicated chain of a mutually dependent network of seemingly private committees and insurance companies. In the case of Disguised Socialized Medicine the administration and execution of these social medical laws is transferred to these organizations, which then posses legal status.

"This type of step by step transition occurred in the Netherlands. It is obvious that Disguised Socialized Medicine is better adapted to delude the medical profession than is Identifiable Socialized Medicine.

"For many years I gained experience with the *concealed, gradual enforcement* of Socialized Medicine in the Netherlands. I propose to discuss Disguised Socialized Medicine in the Netherlands.

"HUMANITARAN RESPONSIBILITY OF THE MEDICAL PROFESSION IS EXPLOITED BY THE LAWMAKERS.

"Around the turn of the century in the Netherlands there existed the so-called 'Physician-Funds' founded and conducted by private physicians. Guided by humanitarian instincts, they provided medical care to low income groups for a negligible weekly premium. These private institutions, scattered over the country, did not have any mutual relationship. Gradually they were taken over and incorporated by private insurance companies. Many unsuspecting physicians were pleased, because their administrative burden was removed. Up to the time of the German occupation of the Netherlands, the income from private practice was in general greater than the income paid by the insurance companies. The Nazi regime imposed compulsory SocializedMedicine a short time after their arrival in the Netherlands, however in a rather limited degree. After the liberation the successive socialistic governments maintained all these regulations concerning Socialized Medicine, gradually increasing its spectrum. At first every employee and his family, earning less than 2500 guilders ($700) was compelled to register for medical care. The premium was withheld from the wages, and at the same time a premium paid by the employer was added. After a short time the income limit was increased to 3400 guilders ($900) and step by step, from year to year the limit of compulsory insurance was raised and is now 6900 guilders ($1800). However the last socialistic government planned to increase the limit further. Entire groups of employees, sailors, officials and the aged were added to this insured category piecemeal, but never at the same time. At the present about 95% of the population is compelled to accept Socailized Medicine by this subtle, indirect mechanism.

"COMPROMISE OF THE QUALITY OF MEDICAL CARE UNDER SOCIALIZED MEDICINE.

"Under Socialized Medicine the unlimited availability of medical care, treatment, and preventive medicine entails overcrowded waiting

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rooms and waiting lists for non-emergency hospital treatment. An average of only a few minutes is available for the patient. There is no time for a skillfully directed history and an adequate examination. Under this system a conscientious physician will attempt to salvage his responsibility by referring serious cases to a specialist. Because of this, the office hours of the specialist shows a similar picture. A as result of this situation the aforementioned committees have compelled the physician to refer to no more than the average referring rate of the area of their jurisdiction, at the risk of a financial penalty subtracted from his professional insurance income. The rising cost of drugs and diagnostic procedures requires a continuing increase of premium payments. However, this method can never compensate for the deficit. Another semi-official committee is appointed to arbitrarily compose a list of drugs which the physician must choose from. This committee also specifies how much of any drug a physician may prescribe in his treatment of patients. A drug not mentioned in this list cannot ordinarily be prescribed, even if the patient is willing to pay for it. Infringement of this rule is punishable by subtracting the cost of the drug from the physician's income. Another rule is, if the average cost of prescriptions of a physician is over 10% of the average cost of prescriptions in the area, this excess shall be subtracted from his income. A host of officials and their offices is needed to calculate this material. The committees and insurance companies maintain the fiction, that every drug deemed necessary by the physician can be prescribed. To preserve the fiction of this system another committee is appointed to evaluate requests for prescriptions of unlisted drugs. Because these committees meet usually once a week, most physicians refrain from the red tape of such detailed written documentation. Every Dutch physician swears before obtaining his license, that he will practice medicine to the best of his ability and knowledge. Thus he is in continual conflict with his professional and moral conscience.

"DANGERS OF SOCIALIZED MEDICINE TO THE PHYSICIAN.

"The insufficient time available for each patient inevitably leads to only the treatment of symptoms, so that a truly serious illness is recognized too late. In order to earn a living a physician is forced to treat an excessive amount of patients, on a *quantity* rather than a *quality* basis. A fixed sum is quarterly paid for each patient. Each patient obtains the right of unlimited house and office calls. Because the great majority of cases seen are of non-serious character, there is a tendency to see each complaint as a trivial or temporary ailment. Most Dutch physicians, therefore, have the unsatisfactory feeling, that they are handicapped in the performance of their duties. Attempts by the physician to limit the number of house and office calls, by paying a very small fee for each visit, by the patient, (so-called 'ticket moderateur' or 'limiting ticket') have failed, because these rights, given to the patient by the law, can not be compromised.

"WARNING TO THE MEDICAL PROFESSION.

"Because I have practiced medicine under the socialized system existing in the Netherlands, and because I am now practicing in the United States of America, under our present system of private initiative, I feel it my moral duty to make known my enforced knowledge of this subject. The insidious step by step, intrusion of Socialized Medicine into our private practice causes less resistance on our part than the abrupt transition which occurred in England. I am convinced that, if the individual American physician becomes aware of these disguised dangers, he will resist the intrusion of Socialized Medicine by all available means. The unity shown by Dutch physicians during the German occupation, against the compulsory Nazi physicians' organization proves that even a reckless enemy cannot force his will on a united medical power. Unfortunately the disunity created among Dutch physicians, particularly among their leaders, concerning the introduction of social medical laws after the liberation, has caused a situation from which one can only escape by immigration. In this country the only limitations to the practice of superior medicine is the extent of the physician's knowledge, training and conscience. I think it is desirable that other foreign physicians, established in the United States of America, publicize their experience with Socialized Medicine, so that every American physician may become aware of the threatening dangers of the future.

"Previous experience makes me grateful and

proud to be privileged to practice medicine as we know it in America today. I trust, it will not be again a case of 'too little and too late.'

'Un homme averti en vaut deux'

"July 10, 1959
112 East 4th St.
Portales, New Mexico"

We hope that Dr. Verhave's firsthand experience will inspire ethical physicians throughout the land to grab the initiative and work courageously to preserve private practice by leading from their great strength: (a) Only a physician can practice medicine; (b) non-participation in any plan for the distribution of medical care which is inimical to the best interest of the patient and physician alike.

Sincerely,

LOUIS S. WEGRYN, M.D.,
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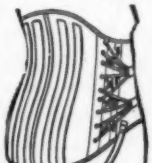

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STATISTICAL STUDY

THE LARGEST medical statistical study ever attempted in America was launched this fall to discover why some people may be more likely to get cancer than others.

This and other questions will be answered in an American Cancer Society study involving more than 1,000,000 Americans. This is the first such large scale family prospective study ever undertaken. The project, which will take six years to complete, wil be conducted with the assistance of 50,000 trained volunteers, it was announced by Dr. Eugene P. Pendergrass, American Cancer Society President. If volunteers were not available to handle the field work, the project would cost many millions of dollars.

The study, under direction of Dr. E. Cuyler Hammond, American Cancer Society Director of Statistical Research, also will probe the effect of environment on cancer and will attempt to learn more about symptoms of the disease to help improve early detection.

Dr. Hammond said that the information to be obtained is designed to test many theories about the cause of cancer as well as to clarify certain known facts about the disease.

Some of these include: occupational hazards in relation to cancer; whether or not a tendency toward cancer is more prevalent in some families; what relationships exist between cancer and other diseases; whether frequency and other factors of childbirth are associated with cancer; how much relationship there is between failure to breast feed a child and the occurrence of breast cancer in mothers; possible relationship between menstrual disorders and uterine cancer or between circumcision and the occurrence of cancer; any relationship between diet, food, beverages and cancer; how effective cigarette filters may be in relation to lung cancer and whether inhaling cigarettes is a factor; how air pollution may be related to cancer; whether or not one's standard of living has anything to do with his getting cancer.

Another major objective of the study is to find out what percentage of the public has undiagnosed cancer. Also investigators would like to know whether those who have cancer have had certain symptoms or think they have had them, or whether they have developed the disease without any apparent symptoms.

The study also should disclose how frequently the patient may be responsible for delay in seeking diagnosis and treatment.

Dr. Hammond said one of the most valuable products of the study would be knowledge that they could forewarn certain persons that they are more likely to fall prey to cancer.

He said, "Suppose that we should find that cancer incidence rates are especially high among certain groups of people, we should then advise such people to have frequent medical examinations, so as to improve their chances of being cured if the disease strikes."

"For this purpose," he said, "it is not necessary to know the underlying reason for an association. It is only necessary that we know that such a relationship does exist."

He said the study may yield information of medical importance aside from the problem of cancer although it is designed primarily to obtain information related to the one disease. Analysis will be made of all physical complaints and other factors in relation to all causes of death.

A pilot study in five cities: Harrisburg, Pennsylvania; Cleveland, Ohio; Baltimore, Maryland; Nashville, Tennessee; and Tampa, Florida, has already been conducted to test methods on more than 4,000 persons.

Employing some of the same prospective techniques perfected in the widely acclaimed American Cancer Society Hammond-Horn study of smoking habits, the project will attempt to study 500,000 families with more than 1,000,000 persons who are at least 30 years of age.

The 50,000 volunteer researchers will each select about 10 households which he or she can expect to trace for the following six years. Each family would be reported on annually. In addition to answering an original questionnaire, each subject will be required to fill out forms with supplementary information every two years.

In the event of deah, the cause will be ascertained by American Cancer Society statisticians from the death certificate and medical records. Supplemental information will be obtained from the doctor who signed the death certificate.

Future Medical Meetings and Postgraduate Education

THIRD ANNUAL CARDIAC CONFERENCE

January 29 and 30, 1960
Arizona Biltmore Hotel, Phoenix

ARIZONA HEART ASSOCIATION SYMPOSIUM COMMITTEE
Dr. Robert H. Bullington, Chairman
Dr. Andre J. Bruwer
Dr. C. Thomas Read
Mrs. Pearl P. Coulter, R.N.
Dr. James E. O'Hare
Dr. Matthew Cohen

The Third Annual Cardiac Conference is sponsored by the Arizona Heart Association in cooperation with the American Academy of General Practice, Arizona Chapter, which has approved these sessions for ten hours post-graduate credit under Category One.

PROGRAM

Friday, January 29, 1960

7:30- 9:00	Registration – Lobby Entrance.
9:00	Greeting by Dr. Donald K. Buffmire, Phoenix. President, Arizona Heart Association.
9:15-10:15	"Possible Clinical Applications in Spatial Vectorcardiography" – Dr. George E. Burch, New Orleans.
10:15-10:30	Intermission – Visit Exhibits.
10:30-11:30	"The Surgical Treatment of Acquired Valvular Heart Disease" – Dr. John W. Kirklin, Rochester, Minnesota.
11:30-12:30	"Present Day Management of Hypertension" – Dr. Robert W. Wilkins, Boston.
12:30- 2:00	Luncheon.
2:00- 3:00	"The Modern Treatment of Cerebrovascular Diseases" – Dr. Irving S. Wright, New York City.
3:00- 4:00	Panel Discussion of Current Cardiovascular Problems – Dr. Robert H. Bullington, Phoenix – Moderator. NOTE: All Speakers will participate in Panel Discussion.

Saturday, January 30, 1960

8:00:- 9:30	Continued Registration – Lobby.
9:30	Greeting by Dr. William A. Butcher, Tucson. President-Elect, Arizona Heart Association.
9:45-10:45	"Management of Congestive Heart Failure" – Dr. George E. Burch, New Orleans.
10:45-11:00	Intermission.
11:15-12:15	"Present Status of Surgical Treatment of Tetralogy of Fallot"–Dr. John W. Kirklin, Rochester, Minnesota.
12:15- 2:00	Luncheon.
2:00- 3:00	"Anticholesterolemic Agents and Atherosclerosis" – Dr. Robert W. Wilkins, Boston.
3:00- 4:00	"Progress and Problems in Antocoagulant Therapy" – Dr. Irving S. Wright, New York City.
4:00- 4:15	Intermission.
4:15- 5:00	Panel Discussion of Current Cardiovascular Problems – Dr. Donald K. Buffmire, Phoenix – Moderator.

Note: All speakers will participate in panel discussion.

For further information or registrations, contact: Arizona Heart Association
541 East McDowell Road, Phoenix, Arizona

LADIES ACTIVITIES

Friday, January 29, 1960

11:00	"Ice-Breaker" Coffee – Arizona Biltmore Hotel Lobby
12:30	Poolside Luncheon – Fashion Show – Arizona Biltmore Hotel
7:00- 8:00	Cocktail Party – Semi-Formal – Arizona Biltmore Hotel.
8:00	Dinner – Dancing.

Saturday, January 30, 1960

10:00 Choice of Ladies Activities:

Golf
Tennis
Swimming

AT THE ARIZONA BILTMORE HOTEL

Trip to Scottsdale
Sight-seeing
Shopping
On-Your-Own

TRANSPORTATION FURNISHED BY WOMEN'S COMMITTEE

CALENDAR OF NATIONAL AND INTERNATIONAL MEETINGS

February, 1960

3-6 – American College of Radiology, Roosevelt Hotel, New Orleans, La.

25-27 – Symposium on Fundamental Cancer Research (14th), M. D. Anderson Hospital & Tumor Institute, University of Texas, Houston, Texas.

March, 1960

13-18 – National Health Council, National Health Forum, Carillon Hotel, Miami Beach, Fla.

15-17 – American Laryngological, Rhinological & Otological Society, Deauville Hotel, Miami Beach, Fla.

17-19 – American Radium Society, Caribe Hilton Hotel, San Juan, Puerto Rico.

18-19 – American Laryngological Association, Deauville Hotel, Miami Beach, Fla.

19-24 – American Academy of General Practice, Philadelphia, Pa.

27-28 – ACS Research Advisory Council, New York City, New York.

27-31 – ACS Science Writers Seminar, New Suburban Hotel, Louisville, Ky.

30 – American Gastroscopic Society, Roosevelt Hotel, New Orleans, La.

31-4/2 – American Gastroenterological Association, Roosevelt Hotel, New Orleans, La.

April, 1960

1-3 American Society of Internal Medicine, Mark Hopkins Hotel, San Francisco, Calif.

3-6 – American Surgical Association, The Greenbrier, White Surphur Springs, West Virginia.

4-9 – American College of Physicians, Mark Hopkins & Fairmont, San Francisco, Calif.

8-10 – (tentative) American Association for Cancer Research, Chicago, Ill.

8-12 – American Dermatological Association, Inc., Boca Raton Hotel, Boca Raton, Fla.

11-15 – Federation of American Societies for Experimental Biology, Conrad Hilton Hotel, Chicago, Ill.

11-15 – American Physiological Society, Chicago, Ill.

20 – ACS Research Committee – New York City, New York.

20-24 – International Congress of Gastroenterology, Leiden, Netherlands.

25-27 – American Proctologic Society, Shamrock Hilton Hotel, Houston, Texas.

28-30 – American Association of Pathologists and Bacteriologists, Hotel Peabody, Memphis, Tenn.

May, 1960

2-6 – American Nurses Association, Miami Beach, Fla.

5-8 — Student American Medical Association, Statler-Hilton Hotel, Los Angeles, Calif.

11-13 — American Association of Genito-Urinary Surgeons, Dearborn Inn, Dearborn, Mich.

11-13 — American Association for Thoracic Surgery, Deauville Hotel, Miami Beach, Fla.

15-18 — International Congress of Surgeons, International Congress, Rome, Italy.

June, 1960

3 — ACS Board of Directors Meeting, Los Angeles, Calif.

5-10 — National Conference on Social Welfare, Atlantic City, N. J.

8-12 — American College of Chest Physicians, Miami Beach, Fla.

13-17 — American Medical Association — Annual Meeting, Miami Beach, Fla.

13-17 — Canadian Medical Association, Banff, Alberta.

13-17 — International Congress of Clinical Pathology, Madrid, Spain.

18-23 — International Congress of Endocrinology, Copenhagen, Denmark.

20 — ACS Research Committee, New York City, New York.

20-21 — Rocky Mountain Cancer Conference, Denver Hilton Hotel, Denver, Colo.

August, 1960

2-5 — International Association of Laryngectomees — Annual Convention, Chase Hotel, St. Louis, Mo.

8-11 — National Medical Association, Inc., Penn-Sheraton Hotel, Pittsburgh, Pa.

24-27 — International Congress of Internal Medicine (Sixth), Basel, Switzerland.

27-9 — American Hospital Association, Civic Auditorium, San Francisco, Calif.

28-9 — International Congress on Diseases of the Chest, Vienna, Austria.

September, 1960

11-15 — International College of Surgeons, Twelfth International Congress, New York City, New York.

13-15 — Fourth National Cancer Conference, Minneapolis, Minn.

22-26 — International Cancer Cytology Conference, Madrid, Spain.

25-30 — College of American Pathologists, Chicago, Ill.

PHOENIX SURGICAL SOCIETY

THE Phoenix Surgical Society cordially extends an invitation to all interested physicians and surgeons to a series of lectures by distinguished speakers.

Dinner and refreshments at 6:30 P.M. Lectures at 8:30 P.M. Mountain Shadows Resort, East Lincoln Drive, Scottsdale, Arizona.

January 12, 1960 — "Chronic Ulcerative Colitis." Dr. Robert T. Tidrick, Professor of Surgery and Chairman of the Department, University of Iowa.

March 8, 1960 — "Surgical Treatment of Duodenal Ulcer — Changing Concepts." Dr. Jack Farris, Professor of Surgery, U.C.L.A.

Dinner $4.65 — by reservation only. For reservations, call or write the undersigned at least four days before each event.

Donald A. Polson, M.D.
Secretary, Phoenix Surgical Society
550 West Thomas Road — CR 4-2081
Phoenix, Arizona.

THE SOUTHWESTERN SURGICAL CONGRESS

THE Twelfth Annual Meeting of The Southwestern Surgical Congress is to be held at the Riviera Hotel in Las Vegas, Nevada, March 28, 29, 30 and 31, 1960.

Reservations are to be made through the Hotel Riviera attention Mr. Elmo Ellsworth. The first 200 reservations will be at the Riviera, the next 200 at the nearby Hotel Sahara, and the remainder at the adjoining Algiers Motel. Assignments will be made in the order received. Each place has a swimming pool and excellent accommodations.

In addition to the usual Las Vegas entertainment, arrangements have been made for a ladies' luncheon (with bingo), golf at the Desert Inn, and tours to Boulder Dam and Lake Mead. The annual banquet will be held in the Riviera's Clover Room. An excellent floor show will be featured.

RADIOLOGICAL CONFERENCE

THE Twelfth Annual Midwinter Radiological Conference, sponsored by the Los Angeles Radiological Society, will be held at the Statler Hotel, Los Angeles, California on Saturday and Sunday, January 30th and 31st, 1960.

An outstanding program of pertinent interest has been arranged and the guest speakers will be: Dr. John A. Evans, New York, New York; Professor Knut Lindblom, Stockholm, Sweden; Dr. James J. Nickson, New York, New York; and Dr. Rohan Williams, London, England.

The conference fee of $20.00 includes two luncheon meetings featuring questions and answers. A banquet ($7.50 per plate) preceded by cocktails will be held Saturday evening. Reservations may be made through: Dr. Sidney D. Zucherman, 3741 Stocker Street, Los Angeles 8, Calif.

Courtesy cards will be available to residents in radiology and radiologists in the Armed Forces by advance registration, with reduced tariff for the luncheons and banquet. Hotel reservations should be made promptly through the Convention Manager, Statler Hotel, Los Angeles, California.

REGIONAL MID-WINTER AND SPRING MEETINGS

January 22-23, 1960
American College of Physicians Regional Meeting
Colorado Springs, Colorado

February 8, 9, 10, 11, 1960
Postgraduate Course in Anesthesiology
Salt Lake City, Utah

March 2, 3, 4, 1960
Postgraduate Course in Obstetrics
Brighton Ski Resort, Utah

March 22-23, 1960
American Academy of General Practice
Utah Chapter
Salt Lake City, Utah

May 12-14, 1960
Nevada Academy of General Practice
Reno, Nevada

May 16-18, 1960
American Ophthalmological Society
Colorado Springs, Colorado

May 18-21, 1960
American Academy of General Practice
New Mexico Chapter
Ruidoso, New Mexico

HAWAII MEDICAL ASSOCIATION

The 104th Annual Meeting of the Hawaii Medical Association, Honolulu, May 12, 13, 14 and 15, 1960.

PARENTERAL ANTIBIOTIC DESCRIBED

Four papers described preliminary studies of a new polypeptide antibiotic, aspartocin, produced by *Streptomyces griseus* var. *spiralis*. In reporting laboratory investigations, Kirsch, Dornbush, and Backus, of Lederle Laboratories, stated that aspartocin possesses activity primarily against gram-positive micro-organisms. Their preliminary studies indicate that the antibiotic is bactericidal in its action against staphylococci. The compound is effective in vitro against bacteria resistant to the tetracyclines, lecuomycin, erythromycin, spiramycin, carbomycin, puromyin, and penicillin.

Redin and McCoy, of Lederle Laboratories, reported the effectiveness of aspartocin against experimentally induced infections in mice. They concluded that when it is administered parenterally, its effectiveness against gram-positive organisms is generally comparable to that of tetracyclines but that it is two to three times as toxic. Aspartocin was found to be inactive orally.

(from Seventh Annual Aantibotic Symposium, Nov. 4-6, 1959, Washington, D. C.)